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THE BRITISH
GYNÆCOLOGICAL JOURNAL

VOL. XX.

Biological
& Medical
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THE BRITISH GYNÆCOLOGICAL JOURNAL

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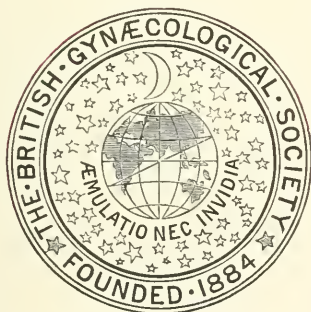
THE BRITISH GYNÆCOLOGICAL SOCIETY

VOL. XX.

EDITED BY

J. J. MACAN, M.D.

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BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, FEBRUARY 11, 1904.

PROFESSOR JOHN W. TAYLOR, M.D., F.R.C.S., PRESIDENT,
IN THE CHAIR.

CASES AND EXHIBITS.

RUPTURE OF A TUBAL PREGNANCY ON THE NINETEENTH DAY AFTER CONCEPTION, AND TEN DAYS AFTER THE UTERUS HAD BEEN CURETTED. By WILLIAM DUNCAN, M.D., F.R.C.S., Obstetric Physician to the Middlesex Hospital.

Mrs. H., aged 27, was married in 1900. She consulted me in October, 1901, for menorrhagia. The periods, which commenced at the age of 12, were quite regular (lasting four days) until the early part of 1901 (some months after marriage), when they began to increase in amount, with pain, the passage of clots, and a mucopurulent intermenstrual discharge. The patient was a healthy-looking but pale young lady of very active temperament. On examination, the uterus felt a little enlarged, was somewhat tender on palpation, was freely mobile and in normal position. Nothing abnormal could be felt in either the lateral or posterior fornices. *Per*

speculum, the os uteri was eroded and some purulent discharge was seen exuding from it. I diagnosed fungous endometritis, and recommended that the uterus should be curetted. The patient went into a nursing home and, under anæsthesia, I dilated the cervix uteri up to No. 14 Hegar, and scraped away a very hypertrophied endometrium. The uterus, after having been swabbed out with liquor iodi, was packed with iodoform gauze for forty-eight hours. At the end of that time the gauze was removed, and a vaginal douche of 1 in 4,000 solution of perchloride of mercury was ordered to be given night and morning whilst the patient remained in the home. (This is my usual method of treatment after curetting the uterus.) The patient made a perfectly uneventful recovery and returned home well at the end of three weeks. I saw nothing more of her until the beginning of last November (1903), when she again consulted me for a recurrence of the menorrhagia. She then informed me that she had had a miscarriage at the third month, at Christmas, 1902, and that since that time the periods have been excessive and with clots. *Since the miscarriage she has never missed a period.* On examination, I found a similar condition of things to that present when she consulted me in 1901, except, perhaps, that the uterus was somewhat more bulky than on the former occasion, but nothing whatever abnormal was found in either fornix. As the next period was due in a few days it was decided that the curettage (which I again advised) should be deferred until a couple of days after the period had ceased. Accordingly, when this occurred, on November 14, after a week's loss, I went down to the patient's home on November 16, and with the assistance of Dr. Gordon Hogg, of Ealing (under whose care the patient had placed herself, and to whose skill and unremitting attention the favourable termination of this most interesting case is largely due), I again curetted the uterus, removing, as on the former occasion, a very hypertrophied endometrium,

but one which did not in the least raise in my mind the suspicion of its being a decidual lining. The patient progressed uninterruptedly well, having neither pain nor rise of temperature, until November 25, when rupture took place.

At 9 p.m. that evening, Dr. Gordon Hogg rang me up on the telephone and asked me to go down and see the patient, as she was bad. He told me that he paid his usual visit about 2 p.m. that afternoon, when the patient was apparently quite well, laughing and joking, and saying she would get up next day. On returning home from his round of professional visits at 7 p.m., he found a letter from the nurse asking him to send something to relieve the patient, who was complaining of pain at the chest and indigestion. Almost directly after reading the letter he received an urgent message asking him to go at once and see our patient. This he did, and on arrival he found her collapsed, pulseless, semi-conscious, and tossing about in bed, with gasping respiration. He at once injected strychnine hypodermically, and put hot bottles to the extremities in order to remedy the collapsed condition. As the patient's condition continued serious he, as I have mentioned, summoned me. On my arrival, soon after 10 p.m., I found the patient practically moribund, pulseless, blanched lips, and gums very pale, and extremities cold. On palpating the abdomen, I found dulness in both flanks and over the hypogastrium. I also thought there was diminished resonance over the liver. It was evident that there was internal rupture of something, with hæmorrhage, also that abdominal section, unless associated with, or preceded by, transfusion, would be certainly fatal. Not having the necessary apparatus and instruments with me, I at once telephoned to my colleague, Mr. Pearce Gould, and fortunately found him at home, and got him to come out at once. Whilst waiting his arrival we prepared in readiness the operating table, also plenty of sterilised water. Mr. Gould arrived

soon after midnight. The patient was at once placed on the table and skilfully put under the influence of ether by Dr. Robert Pitcairn Cockburn. Mr. Gould first started the infusion of saline fluid into the left submammary cellular tissue, and handed the care of this over to Dr. Gordon Hogg, whilst he opened the left cephalic vein and performed intravenous transfusion (also of saline fluid). Immediately this transfusion was thoroughly started. I rapidly opened the abdomen, which was found full of liquid blood with some clots. The right uterine appendage was brought into view and proved to be normal, but when the left was drawn out there was seen to be a small, round perforation of the somewhat thickened tube near its uterine end (specimen shown). The broad ligament was quickly transfixed and tied with silk in the usual way, and tube and ovary removed. Most of the blood was sponged out of the abdominal cavity, which latter was also flushed with a lot of sterilised water, some of which was left inside. The abdominal wall was sewn up in three layers. Whilst this operation was proceeding nearly two quarts of saline fluid had been injected (submammary and intravenous). After the operation, which lasted from twenty to thirty minutes, the patient was returned to bed, still in an extremely dangerous condition, although the pulse was faintly perceptible at the wrist. Hot bottles were applied, strychnine injected hypodermically, and an enema of brandy and beef-tea administered *per rectum*. When Mr. Gould and I left we could only give the relatives slight hope. Everything, of course, depended on whether the patient could be kept alive for the next few hours. We left her in Dr. Gordon Hogg's care, and the ultimate successful issue is greatly due to his unremitting attention.

At about 9 a.m. Dr. Hogg telephoned the welcome news that the patient was alive and conscious, that her pulse was better, her temperature normal, and she was able to take nourishment. The subsequent history can

be related in a few words. The patient made an uneventful recovery and is now (January 30, 1904) quite well and getting about as usual.

REMARKS.

This very interesting case presents several points for consideration :—

(1) *The Duration of Pregnancy before Rupture took Place.*—This can be accurately stated to be the nineteenth day, as after her recovery I went to see the patient in order to make sure of the date. She informed me that coitus took place on the Friday before her period commenced, namely, November 6, and not for some time previous to then. Before questioning the patient I expected to hear that coitus had occurred on either of the two days which intervened between the cessation of the period and the curettage. This would have given eleven or twelve days before rupture. However, the patient was very positive that no coitus had taken place on either of those dates. As far as I can ascertain, there is only one other case recorded in which rupture of a tubal gestation took place as early as the nineteenth day. That is one reported by Mr. Rumley Dawson in the *Obstetrical Transactions* for the year 1898 (vol. xl., p. 155). In that case the rupture, which was near the uterine end of the tube, is said to have occurred on the fifteenth day. The patient was a multipara, and had not missed a period. Internal hæmorrhage was diagnosed, but no operation was performed, and the ruptured tubal gestation was only discovered *post mortem*.

(2) *As regards Diagnosis.*—When I first saw the patient there can be no question but that she was suffering from fungous endometritis, and although a tubal gestation was present *when I curetted the uterus*, seeing that it was only nine days old, and that the history was totally against pregnancy, I think it will be considered excusable my

having failed to detect the slight enlargement of the left Fallopian tube, which must have been present when I examined the patient under anæsthesia before proceeding to curette the uterus. The more I see of cases of extra-uterine pregnancy, both in hospital and private practice, the less value do I know can be placed on the history of a patient having missed one or two periods. In many of these cases no such history can be obtained by the most careful questioning.

(3) *When the Rupture took Place.*—When Dr. Gordon Hogg rang me up on the telephone I confess I did not attach as much importance as I ought to have done to his statement that the patient, a few hours after he had seen her perfectly well, was collapsed and pulseless. I could not imagine anything having gone wrong with the pelvic organs ten days after curetting the uterus. However, on my arrival at the house and seeing the patient blanched (she was naturally pale), pulseless, and finding dulness in the flanks and over the abdomen, it was at once obvious that rupture of something had taken place with extensive hæmorrhage, which would ere long prove fatal unless operated upon. It seemed to me that the diagnosis lay between (a) rupture of a tubal gestation, and (b) perforation of a gastric ulcer with profuse bleeding. I leaned to the gastric ulcer view, as not only was the history completely against tubal pregnancy, but also I could not imagine myself failing to detect an enlarged tube; the fact also that on the afternoon of the accident the patient complained of indigestion and pain at the epigastrium helped to obscure the diagnosis.

(4) Whatever the cause of the condition was, it was perfectly certain that the abdomen must be opened, as no one suffering from rupture of any internal organ with severe hæmorrhage should be allowed to die without an exploratory operation having been performed. In this case the patient was too bad to subject her to a severe operation without first (or, at any rate, simultaneously)

transfusing her, and as I had not taken my transfusion apparatus with me, it was indeed fortunate to be within telephonic reach of skilled help and all the necessary instruments. This case teaches the lesson to always carry one's transfusion apparatus.

Lastly.—With regard to the parts removed, it will be seen from the specimen that the thickening of the Fallopian tube was comparatively slight, limited to the uterine half of the tube, and that the rupture took place near the uterus.

My friend, Dr. Victor Bonney (Obstetric Registrar and Tutor at the Middlesex Hospital) has made some excellent microscopical sections across the gestation sac, and a beautiful drawing of one of these is given. The section and the drawing made from it, which you see thrown on the screen with the epidiascope, very clearly show the gestation sac to be altogether away from the lumen of the Fallopian tube, and proves that what happens when a tubal gestation occurs is this: "The minute embryo burrows through the epithelial lining of the tube into the muscular coat, where it develops, whilst the opening into the tube itself closes up again."

PATHOLOGICAL REPORT BY DR. VICTOR BONNEY.

The specimen consisted of a Fallopian tube and attached ovary. The tube appeared normal to the naked eye, except at the junction of the isthmic and ampullary portions. Here was situated a small, hollow enlargement communicating with the outside by means of a clearly punched hole through which a small pencil might be passed. The cavity was principally in the tube wall, its outer wall being formed of thinly stretched tubal peritoneum, whilst its inner boundary was evidently in close connection with the tubal lumen, though whether it communicated with it was impossible to determine without cutting transversely across the tube at this point. On a transverse section being made across the tube on the uterine side of the punched-out aperture it was seen that

the cavity was situated in the wall of the tube, and did not communicate with the tubal lumen at any point. Its outer wall was very thin, consisting practically of peritoncum only, but that towards the lumen of the tube was thicker, and contained muscle elements. The course of the lumen of the tube was marked in the inner wall of the cavity as a curved elevated ridge, much in the same way as the course of the aqueductus Fallopii is indicated on the inner and posterior walls of the tympanic cavity when the middle ear is opened up for dissection. The cavity contained clot and portions of chorionic villi.

Microscopically the following appearances were found : A considerable section of the tube and its contained gestation sac was removed, and the continuity of the specimen restored by sutures. This section was then prepared and cut in serial sections to the number of about 150. The appearances of individual sections were practically the same. The tubal lumen appeared intact, and was separated from the gestation sac by a well-marked muscular layer (capsularis) of considerable thickness. The plicæ appeared perfect, as was also the case with the columnar epithelium covering them. The tube was empty. The gestation sac is situated in the outer part of the tube wall. It contained well-marked chorionic villi, with a distinct epithelium consisting of the two layers known as Langhans and syncytial respectively. In many parts, however, a much greater thickness of the syncytial layer was observable, and in those parts of the section where the villus was applied to the wall of the gestation sac these proliferating syncytial masses could be seen infiltrating the sac wall. The sac wall contained many spaces containing blood, part of which appeared to be surrounded by cells of embryonic origin. Many large cells resembling decidual cells were seen in the sac wall, but these were continuous with masses of syncytium, and in all probability they were of embryonic and not of maternal origin. There was therefore an absence of any structures which could be described as "decidual," and it is probable that such cells are strictly the derivative of the stroma cells of the endometrium, and therefore do not occur when the ovum is situated in the midst of muscular tissue as, in the absence of a subepithelial stroma, it appears to

be in tubal gestation. To the absence of decidual cells is probably to be ascribed the rapidity with which a tubal gestation erodes the walls of the gestation sac and brings about early rupture. The specimen is of great interest, bearing out, as it does, the views put forward by all the modern German authorities, and lately epitomised in England by Dr. Russell Andrews, that in all cases the implantation of the tubal gestation is primarily in the muscular wall of the tube, and not, as was formerly supposed, in the surface of the tubal epithelium, and therefore within the tubal lumen.

Dr. MACNAUGHTON-JONES made a supplementary report on a tubal cyst shown by him at the December meeting, in which there had been some question as to the nature of the hæmatocele and the relation of the blood sac to the tube. The patient had gone a fortnight past her period when he first saw her, but there was no suspicion of ectopic gestation; he operated a few days later and she got perfectly well. The specimen had since been carefully examined; there was no doubt as to the tubal gestation, as, though there were no products of gestation in the blood clot, chorionic villi were found in the section of the tube. The blood sac was a hæmatocele containing ovarian tissue and covered by a layer of broad ligament. There was a communication between the ovarian sac and that of the ectopic gestation.

The PRESIDENT said that Dr. Duncan's paper and the beautiful demonstration he had given them of a tubal pregnancy, not in the lumen of the tube, but invading the muscular wall, were of extreme interest. In his own book he had described a case in which rupture followed almost immediately after dilatation and the use of the curette. In the clinical diagnosis it was most important to exclude extrauterine pregnancy before venturing upon that proceeding, the effect of which, in some cases, had been to precipitate disaster.

Dr. HERBERT SNOW congratulated Dr. Duncan on the

very successful issue of his case. Personally, he thought that curetting was not a procedure to be lightly undertaken. It involved risks of serious hæmorrhage, perforation, septicæmia, even of directly consequent cancer. He considered that, by swabbing out the cavity of the uterus with a strong preparation of iodine, as good results could be obtained as by the most thorough use of the curette, always supposing there were no placental residua.

Mr. W. D. SPANTON said that the issue of such cases as the one narrated seemed to him to depend very greatly on the length of the operation. Every minute was of importance. He therefore demurred to the use of three layers of sutures, as one layer was, he thought, sufficient, and should occupy a minute at the most.

Mr. CHRISTOPHER MARTIN asked for further explanation of the separation of the gestation sac from the lumen of the tube by a distinct muscular layer; might there not have been a rupture of the muscle and of the lumen of the tube elsewhere not shown in the section?

Dr. H. C. POPE asked for the particulars of any discharge which had occurred before the operation for curetting.

Dr. DUNCAN, in reply, said that he entirely agreed with the President that there was danger in curetting if there was any likelihood of extrauterine gestation. He did not consider that there was much risk in dilating and curetting the uterus and swabbing it out, or, as preferred by himself, pouring in tincture of iodine so as to wash out the entire cavity. Very little extra time was taken up by suturing in three layers; the entire proceeding need only take a couple of minutes or so. The section shown was not cut through the rupture, but the number of sections made proved that the gestation sac did not open into the lumen. When an ovum attached itself to the mucosa of the tube wall, it penetrated the mucous and muscular layers and its point of entry closed up behind it.

Dr. MACNAUGHTON-JONES showed an aseptic cap to

cover the nose and mouth during operations, which he had devised; it was very light and was supported on a spectacle frame, and was, he thought, more suitable than other instruments of the kind.

The following cases were then read:—

A STRANGE RESULT OF IODOFORM DRESSING. By H. MACNAUGHTON-JONES, M.D., &c.

The local toxic effects of iodoform occasionally result in cutaneous conditions which are more or less serious, according to the extent of their invasion of the skin and their spread to other parts. The more common, which I have frequently seen, are general redness and swelling of the skin of the abdomen and down the thighs, sometimes extending from the trunk to the upper extremities, the eruption being very similar to that of scarlet fever. In several cases it was associated with a fine vesicular eruption, principally affecting the region of the wound. Other observers have had cases in which the vesiculation has extended into the deeper layers of the skin, resulting in considerable œdema, and in some instances in a sanguinolent effusion resembling superficial gangrene.¹

A patient, aged 30, on whom I recently operated for retroversion of the uterus by ventro-suspension, at the same time resecting an ovary, was progressing favourably until the third day after the operation. She then complained of irritation, and some smarting in the neighbourhood of the wound, which had been stitched with celloidinzwirn, a pad of moist sterilised 10 per cent. iodoform gauze being placed over it, and covered with cœletin. On raising the dressing, the nurse found some slight swelling and redness along the area of the incision. On the following day, when I examined the wound, the redness had extended to a considerable area, and the

¹ "Reference Book of Practical Therapeutics," by E. P. Foster, p. 339, vol. i., 1897. "Taylor's Jurisprudence," p. 427, vol. i.

entire surface of the skin for a few inches at either side was vesicated. Attributing the condition to the iodoform, I had this removed, and the wound lightly sponged over with some weak formalin solution, dried, and dusted with dermatol (the subgallate of bismuth), covered with plain sterilised gauze and protected with colætin. The distress continued, and on removing the dressing the next day I found several large vesicles, like those raised from an ordinary blister. One or two had burst, and the others were opened, and a quantity of serous fluid evacuated. There now appeared on the arms and hands some eczematous vesicles, and also a papillary eruption here and there, which was attended by great irritation. Much the same condition followed on the legs. The palms of the hands became red, and finally desquamated. Some three days later fresh vesicles appeared in the neighbourhood of the wound. There were no constitutional symptoms, and the temperature range shows that there was but a slight elevation on a few occasions, while the pulse remained normal. The skin healed by first intention, the sutures being removed on the eleventh day.

Inquiring into the history of the case, it appeared that many years previously the patient had had an ulcer on the leg. This had been dressed with iodoform, when much the same effects had followed the leg becoming œdematous, while a slough, extended some distance up, leaving an extensive cicatrix. The effects of the dressing were not discovered until after the toxic consequences had resulted. From her childhood she had had an eczematous tendency, and there were symmetrical palmar patches of dry eczematous desquamation of long standing on the hands.

She left the Home perfectly well at the end of the fourth week with only some remains of the eczematous condition.

I have not seen a record of any case exactly similar to this, which is peculiar in the large blebs, somewhat like those of pemphigus, that appeared in the neighbour-

hood of the incision. One cannot help pondering on the consequences which would have followed in such a case had a vaginal fixation been performed, and the vagina tamponed with iodoform. I had the wound photographed when the vesiculation was at its height, but unfortunately, owing to the defective light, the photograph was not successful. One thing is clear—it is worth while inquiring, in any abdominal or pelvic operation in which iodoform is likely to be used, whether the patient has been subject to any cutaneous affection, and if so, to substitute another dressing for that of iodoform.

NOTE ON A CYST SIMULATING FEMORAL HERNIA. By
HERBERT SNOW, M.D.Lond., &c., Senior Surgeon,
Cancer Hospital.

Mrs. L. S., aged 69, widow, a rather flabby, elderly woman, consulted me on December 10 last. She had worn a femoral truss on the left side for seven years, and now had in the right groin a globular elastic swelling of between three and four years' duration. It was of the size of a pigeon's egg, could not be reduced or diminished in bulk by pressure, and gave some impulse on coughing. She had never worn any truss for this. On removal of the left truss, a similar swelling became apparent, also with a certain degree of impulse on coughing. On pressure this diminished considerably in apparent size, though it did not wholly disappear. She considered that the truss had given her great relief.

An operation was advised. Upon incision it became apparent that the right tumour was a cyst containing about an ounce of clear, straw-coloured fluid, and with a narrow pedicle issuing from the femoral canal below Poupart's ligament in the usual site of femoral hernia. It contained nothing but this liquid. The wall resembled thickened peritoneum. It was slit up, and the interior carefully inspected. No aperture in the pedicle could be detected, and attempts to pass a probe failed. The

cyst was excised and the pedicle ligatured. The woman made an uneventful recovery.

The left tumour was not interfered with, as no permission had been obtained to attack it, and the woman was quite satisfied with her truss. There can be no doubt that the condition was exactly identical. The impulse on coughing was found to disappear when the cyst was lifted up from its pedicle.

The right femoral cyst excised was evidently a peritoneal diverticulum, exactly similar in appearance and in average size to the common canal of Nuck cyst above Poupart's ligament. Mr. Cecil Leaf, who kindly assisted me at the little operation, suggested that a hernial sac had become nipped (and the lumen of the pedicle thus obliterated) by the edge of Gimbernat's ligament, the usual site of strangulation in hernia. The explanation is to some extent plausible, but we have no evidence that any intestine or omentum had ever been extruded, and the cysts were bilateral. I am inclined, therefore, to consider that the condition was of congenital origin.

I was not, before operating, satisfied that the impulse on coughing was sufficiently marked to be characteristic of hernia; but there certainly was a sufficiently marked impulse to deceive a hasty observer.

An exactly parallel condition to that presented by the canal of Nuck cyst, with which we are all familiar, at the external abdominal ring—not above but below Poupart's ligament, and with its pedicle issuing from the femoral canal—seems to me a very unusual state of things. I shall be glad to learn if any Fellow has encountered a similar case.

NOTE ON ONE OF THE CAUSES OF BLADDER IRRITATION IN GIRLS. By W. DUNNETT SPANTON, F.R.C.S., &c., Consulting Surgeon to the North Staffordshire Infirmary.

Every surgeon must have sometimes met with obscure cases of bladder irritation or cystitis in little girls, in which

it has been difficult to assign a cause. Some instances have occurred in my practice which will tend to throw light on this subject and are therefore, I think, worth recording.

When a child is brought to the surgeon complaining of pain in the vesical region, frequent micturition and urethral irritation, the urine cloudy, perhaps containing a small quantity of blood and mucus, or muco-pus, without any constitutional disturbance, one generally would ascribe it to one of the following conditions :—

Diabetes, azoturia, calculus, or other foreign body in the bladder, or urethra, or kidney, or possibly tubercle or malignant growth. The two last are rare and improbable.

Of course the first thing to be done is to examine the condition of the urethra, and after examining the urine, to explore the bladder. The urethra may show signs of urethritis, but insufficient to account for all the symptoms; the examination of the urine may indicate an excessive amount of uric acid, sugar, mucus, pus, blood, and possibly such irritating substances as oxalate of lime or triple phosphates.

If either oxaluria or azoturia exist, simple remedies will soon suffice to remove the irritation, but the presence of any inflammatory products will render this less likely. Then it will probably be found that the orifice of the urethra is sore and tender, and there may be discovered a tiny caruncle—and these will have to be eliminated from consideration. We then explore the bladder and find nothing; when the puzzle as to the cause remains unsolved.

It is in such cases that I have found the wisdom of going more minutely into the question, and I will give a short account of three little patients in whom the same condition was found to exist, which will serve as an illustration :—

The first was a bright, healthy little girl about 3 years of age, who cried on micturition, which became very frequent, only small quantities of urine being passed each time. I found the urethral orifice tender and sore, and

thinking this might be the sole cause of the trouble, prescribed some soothing application and gentle aperient simply. The urine was examined and found free from sugar and abnormal elements, but contained a little mucus, and a few blood corpuscles. The symptoms continued the same, so I passed a sound into the bladder under chloroform, suspecting there might be a calculus or some other foreign body. This revealed nothing; but the urine which was next passed being examined, we found in it a shreddy-looking mass, with mucous cells, a few blood corpuscles, and mixed phosphates and urate of soda. Under the microscope the fluffy mass was shown to consist of an aggregation of woollen fibres entangled in mucus, and there were other woollen fibres also found free. Beyond a few blood corpuscles, crystals of mixed phosphates and amorphous urate of soda, nothing unusual was seen.

The next point was to discover how this irritating material had found its way into the bladder. I examined the child's under-garments, which consisted of thick woollen combinations, rather rough at the edges. The woollen fibres of these garments were carefully examined. I then came to the conclusion that, as the woollen fibres found in the urine exactly corresponded to those in the new set of "combinations" the child had been wearing, that the woollen material had chafed the urethra, some of the fibres had wormed themselves along it into the bladder, and so set up the irritation. When we remember the peculiar barbed edges of woollen fibres, it is quite easy to understand how they would travel up the urethra in the same way as an ear of grass or barley does; and this also explains why the smooth fibres of flax or linen fail to do so. The garment was changed for a cashmere one, diluents were given freely to wash out the bladder, and in a few days every symptom had disappeared, and there has never been any since that time. I imagine that the sounding dislodged some of the woollen fibres, and as no more entered the bladder, this led to the cure.

The next case was an older sister of the first, aged about 6. The symptoms in this child began in precisely the same manner. The urine on examination was found to contain woollen fibres, as in her sister's case, along with some mucus, and was of high specific gravity. The mother described it as containing "a long filmy substance," which proved to be wool fibres held together by bladder mucus. I did not, in the light of the former case, think it necessary to pass any instrument, but merely changed the underclothing, gave Contrexéville water freely, and very soon every symptom disappeared—never to return.

Some time afterwards, in 1901, another instance presenting similar features came under my notice. A merry little girl, aged about 5, was observed to show signs of irritation about the bladder, with frequent micturition and complaints of pain. There was no incontinence nor retention. I found her apparently in perfect general health. The symptoms were precisely similar to the former ones, but the urine was found overloaded with uric acid and urates as well as containing the minute woollen threads. The note of urine examination was as follows: Sp. gr. 1030, no albumin nor sugar, uric acid and oxalate of lime crystals, mucus and aggregations of fine woollen fibres.

The first thing to be done was to lessen the amount of nitrogenous food, to exchange the woollen garments next the skin for silk, and then give Contrexéville water freely. The child speedily got well, as in the former cases, and has had no trouble since.

It is often such little matters as these which, being overlooked, lead to the discredit of the surgeon, and it behoves the younger practitioner especially to bear in mind that such trivial causes may readily simulate more grave ones. They may then lead to a persistence of symptoms which, if unrelieved, may lay the foundation for gravel, for intractable cystitis, or possibly form, in a tuber-

culous subject, a focus for tubercle to attack—or, in other instances, a nucleus for stone. In fact, if we adopt Reginald Harrison's theory of the formation of calculi, it seems highly probable that threads entangled in the mucus of the bladder would readily lend themselves to such an evil purpose.

I daresay the same observations have been made by other surgeons, but no mention of them has ever come under my notice, and I have looked for them in the text-books in vain.

The PRESIDENT, after thanking Dr. Snow and Mr. Spanton for their interesting communications, delivered his Inaugural Address on :—

THE DIMINISHING BIRTH-RATE AND WHAT IS
INVOLVED BY IT.

GENTLEMEN, — The Presidency of the British Gynæcological Society is an honour which I fully appreciate, and which I would simply and heartily acknowledge. This Society, from its beginning, has been truly British in its scope and interests. It has freely and graciously recognised the work and claims of the provinces as well as those of the metropolis ; and in representing to some extent, however unworthily, the work and claims of Birmingham and the Midlands, I do joyfully appreciate the place held by us in the heart of the Society and in the very centre of its labours.

As I enter upon my duties this evening, I do so with a sense of great responsibility ; and this is undoubtedly increased by the recognition of the difficulty and yet immense importance of the subject which I have chosen for my Inaugural Address. This—" The Diminishing Birth-rate, and what is Involved by It "—I purpose now to deal with, trusting I may count on that consideration, sympathy and interest which so serious an undertaking may reasonably demand.

I.

IN one of the chapters of Mr. Ruskin's well-known book on Political Economy, "Unto This Last," he deals with an inquiry into what he calls the "veins of wealth." He exposes the fallacy that the wealth of a State lies solely or essentially in material possessions—showing that apparent or nominal wealth which fails in its authority over men, fails in essence and ceases to be wealth at all—that the true veins of wealth are, as he says, "purple—not in rock but in flesh," and the "final outcome and consummation of all wealth is in the producing as many as possible full-breathed, bright-eyed, and happy-hearted human creatures."

In his final chapter, "Ad Valorem," Mr. Ruskin writes: "There is no wealth but life. That country is the richest which nourishes the greatest number of noble and happy human beings"—"the nobleness being not only consistent with the number, but essential to it. The maximum of life can only be reached by the maximum of virtue."

The principles or truths contained in these passages—passages which bear the strictest examination and criticism—may be, and are, very generally accepted, theoretically. But the history of the nation during the last twenty-five years shows that the principles which govern its real life are altogether different and directly contradictory.

To-day we are brought face to face with unanswerable statistics proving that our birth-rate is steadily diminishing. This has already attracted the serious consideration of statisticians and of some of our statesmen, but the inquiry into its causes has been confused and incomplete. Here, I hope, we can at least discuss these plainly and fearlessly, for some of the problems connected with causation are essentially gynæcological, and can, perhaps, only be rightly gauged by those who have special medical and gynæcological experience.

The subject is a great one—so great, indeed, that if

the nation could only see it in its true proportion, it would, I think, be found to dwarf all other questions of the day.

I cannot hope in the time at my disposal to enter fully into all its phases. I do hope, however, to take the most salient and striking features of the statistical data at our command, to inquire what is meant and involved by these, and to consider how far the profession and the public may do anything to check the apparently relentless progress of an evil destiny.

The best tables for our primary consideration are some of those which have been compiled by Mr. Holt Schooling, the statistician. In Table 1 we see the average yearly number of births to each thousand persons living in the United Kingdom during five successive periods of five years each.

Table 1.—The average yearly number of births per 1,000 persons living in Great Britain and Ireland, during the five-yearly

Periods.	...	...	...	...	...	...	...
1874—1878	...	...	...	...	...	...	34·3
1879—1883	...	...	...	...	...	...	32·6
1884—1888	...	...	...	...	...	...	31·2
1889—1893	...	...	...	...	...	...	29·8
1894—1898	...	...	...	...	...	...	29·1

(Note the steady decrease, 34, 32, 31, nearly 30, 29, and in 1901 it had come down to 28.)

Now let us compare this with exactly similar statistics of other countries :—

Table 2.—The average yearly number of births per 1,000 persons living during the five-yearly

Periods.	Austria.	Germany.	Italy.	Great Britain and Ireland.	France.
1874—1878	... 39·4	... 40·1	... 37·0	... 34·3	... 25·8
1879—1883	... 38·4	... 37·5	... 36·8	... 32·6	... 24·8
1884—1888	... 38·1	... 36·9	... 38·2	... 31·2	... 23·9
1889—1893	... 37·1	... 36·3	... 36·9	... 29·8	... 22·5
1894—1898	... 37·3	... 36·1	... 34·9	... 29·1	... 22·3

If we compare the top line with the bottom we see that in each case there has been a fall, so that a diminish-

ing birth-rate is not a feature of our own kingdom only, but is to some extent European in its scope or effect, and the lowest birth-rate is that of France.

Of the other great powers and nations—the United States, Russia, China, and Japan—no certain statistics are available, but we have very good reason to believe that the birth-rate is seriously falling in the States, but notably rising in Russia and Japan. According to Russian statistics from 1892 to 1894, the birth-rate per 1,000 was 47·7, and from 1894 to 1897 the birth-rate per 1,000 was 49·5, so that there has been not only no loss or diminution in the birth-rate here, but the figures are also far above those already tabulated. So far, the data we have considered show us that the birth-rate throughout the whole of the West is diminishing, while that of the East is rather expanding.

We now want to consider the relative birth-loss of the various Western nations as compared with one another, and this brings us to the most important and startling of Mr. Schooling's tables.

He takes the birth-rate statistics for 1874 to 1878 in each European nation as the standard for that nation, and places against this the statistics for 1894 to 1898, computing from this the loss of birth-force in the twenty years. The following is the result :—

		The yearly birth-force during 1874-78 taken as		The yearly birth-force during 1894-98 was only		The percentage of yearly loss during 1894-98 was
Norway	...	100	...	96	...	4
Denmark	...	100	...	95	...	5
Austria	...	100	...	95	...	5
Italy	...	100	...	94	...	6
Hungary	...	100	...	91	...	9
Germany	...	100	...	90	...	10
Switzerland	...	100	...	90	...	10
Belgium	...	100	...	89	...	11
Holland	...	100	...	89	...	11
Sweden	...	100	...	88	...	12
France	...	100	...	86	...	14
United Kingdom	...	100	...	85	...	15
England and Wales	...	100	...	83	...	17

In other words, while Norway, Denmark and Austria very nearly keep up their birth-force of twenty years

ago, the other nations in their order show an increasing loss, and England and Wales stand at the very bottom of the list. None of the other nations have sustained so great a loss as we have in this definite period of time.

During the same period of time the marriage-rate in the United Kingdom has not altered much, but during the last ten years or so has been slowly rising. The figures in the returns of the Registrar-General are as follows (Table 44, 1900) :—

							Persons married to 100 living.
1876—1880	...	...	...	...	...	...	14·2
1881—1885	...	...	...	...	...	...	14·1
1886—1890	...	...	...	...	...	...	13·8
1891—1895	...	...	...	...	...	...	14·3
1896—1900	...	...	...	...	...	...	15·2

So that we may take the birth-loss in the United Kingdom as due to causes operating in the married life of its inhabitants. It is not simply due to celibacy.

The fertility of marriages appears to have so much diminished that the decrease in London alone is said to “equal 26,000 births yearly, or about 500 weekly.” (Mr. T. A. Welton, at a meeting of the Royal Statistical Society, June 17, 1902.)

But some may say, England and Wales are only a small part of the Empire, and the statistics of Great Britain, where there is but little room for expansion and increase, form no criterion of the birth-rate in our Colonies. Unfortunately, what statistics are available on this point, and notably those of Australia, offer no encouragement to the hope that the Colonies are much better than ourselves.

In Australia the birth-rate has fallen with an even still greater rapidity than in England. In 1861 to 1865 the rate was 41·9 per 1,000, but had diminished in 1871 to 1875 to 37·3; in 1881 to 1885 to 35·2; and in 1891 to 1895 to 31·5; while in 1896 to 1899 the rate was only 27·35, or actually below the rate of increase at home. If we work out these figures in harmony with Table 3,

we find Australia a long way below all the European nations, with a birth-force down to 70·3 and a percentage of yearly loss amounting to nearly 30.

Regarding this, Mr. H. W. Wilson writes: "The decline in Australia is great in every position of life, among the poorest and the richest alike, and it is the more extraordinary because the greatest want of Australia is a teeming population."

But any statistical inquiry, to be of value, must be considered in all its bearings. It has been said, and with considerable reason, that there is nothing so unreliable as statistics, and this may be the case when these are imperfectly considered. In the present instance, if we are desirous of estimating the true wealth or value of the population we possess, there may be a fallacy in mere numbers. It may well be that twenty children better clothed, better fed, better educated, better trained, may develop into men higher socially and morally, stronger and better able to hold their own than 100 children less advantageously brought up. Can we hope that the type of man is improving?—that the generation of Englishmen to-day, though falling short in birth-force, is yet greater than the generation preceding it?

Again, unfortunately, we must sorrowfully admit that we have not sufficient ground for believing this. The criminal statistics, though showing a general and steady reduction in the whole criminal population of the United Kingdom, during the last twenty years (a fact which is very encouraging), do *not* show a corresponding diminution in juvenile criminality, and it is necessarily the youth of our country to which any estimate of the last twenty-five years would more particularly apply.

According to August Brähms, in his work on "The Criminal" (p. 272), "Juvenile criminalism is on the increase. Forty per cent. of the convictions in England every year are against young persons under 21 years of age." And on p. 281 he appends a table which shows

a higher percentage of criminals under 20 years of age in England than in any of the other European countries there tabulated.

The Lunacy statistics of England and Wales show a steady proportionate increase of lunatics and idiots, especially during the last few years.

In 1869 there were 23·93 lunatics, idiots and persons of unsound mind to 10,000 of population.

		10,000 of population.					
5 years ending	{	1879	...	...	...	...	27·54
		1889	...	...	...	...	29·65
		1894	...	...	...	...	30·58
		1899	...	...	...	...	32·96
		1903	...	...	...	...	34·14

(From the 57th Report of the Commissioners in Lunacy, 1903. Parliamentary Blue Book.)

Or in other words, the increase of lunatics and idiots in England and Wales has, during the last fifteen to twenty years, been very nearly double the old rate.

The natural deduction from these figures that insanity and idiocy are increasing seems also to be proved by the recent statistics of the new admissions to asylums and licensed houses. The ratio of first admissions to 10,000 of population has been as follows:—

In 1899	...	...	...	...	...	...	4·94
„ 1900	...	...	...	...	...	...	5·02
„ 1901	...	...	...	...	...	...	5·28
„ 1902	...	...	...	...	...	...	5·76

(*Ibid.*, p. 95.)

It is very difficult to obtain trustworthy statistics regarding alcoholism, but those given in the “Temperance Problem,” by Messrs. Rowntree and Sherwell, are probably the best. According to these the consumption of wine per head of the population has varied but little during the twelve years from 1885 to 1897, but during the same time, the consumption of beer has gone up from 27·5 gallons to 31·3 gallons, and of spirits from ·93 gallons to 1·02 gallons; and the “National Drink Bill” (p. 437), which was estimated at £3 7s. 10d. per head in 1885, came to £3 16s. 10½d. in 1898. In London (Metropolitan Police

Area) there were, from 1885 to 1889, 4.33 arrests for drunkenness to 1,000 of the population. In 1897 the proportion had risen to 7.35 (p. 499).

So, in juvenile criminalism, in mental disease and brain weakness, and even in alcoholism, the restricted population of the present day compares unfavourably with that of a former generation.

If we try to go on and trace this comparison further, and compare the general culture of the more intellectual classes of the two generations over a limited field—for no general statistics are available—still the investigation (though necessarily imperfect and tentative) seems to point to an unfavourable conclusion.

In my own city of Birmingham, a critical survey of its chief semi-public literary and artistic institutions has been recently made by Mr. Howard S. Pearson, and he publishes a tabulated statement showing the support given to these twenty years ago, ten years ago, and to-day. (*Central Literary Magazine*, November, 1903.)

His figures show as a net result that in the course of twenty years there has been a loss of 366 subscribers, or about one in fourteen. "This would be discouraging, but it is by no means all. The population of the city and district has vastly increased, while this care for intellectual and artistic culture has materially diminished. In brief, the population has increased by more than one-fourth, while the interest in the institutions named has decreased by one-fourteenth." Later on, Mr. Pearson writes: "These institutions are not some among many; they have actually no rivals at all. Neither in the city nor in the neighbourhood is there anything which even pretends to touch their special work. They stand, each in its own way, for the general and intellectual culture of the educated classes. The very aim and intent of all our strenuous efforts in the cause of education is to increase the proportion of the educated classes and to lead to a life-long interest in culture. And as the population rises,

as education becomes more far-reaching, as art is more and more talked about, even so must grow the discouragement of all who might have hoped to gather from the changed conditions a larger sympathy in their work."

It must be confessed that the more deeply and thoroughly one goes into this matter the more serious does it appear. Prof. Karl Pearson (Huxley Memorial Lecture, 1903, and *British Medical Journal*, October 24, 1903), who has approached it from an altogether different standpoint—from a careful study of the inheritance by children of the mental and moral, as well as the physical characters of their progenitors—comes to much the same conclusions. He notes that there appears to be a want of intelligence in the British merchant, workman and professional man of to-day, and sees but little hope in the usually proposed remedies of foreign methods of instruction and the spread of technical education. "The reason for the deficiency," he states, "is that the mentally better stock in the nation is not reproducing itself at the same rate as of old—the less able and the less energetic are the more fertile. Education cannot bring up hereditary weakness to the level of hereditary strength, and the only remedy is to alter the relative fertility of the good and bad stocks of the community. The psychical characters which are the backbone of a State in the modern struggle of nations are not so much manufactured by home and school and college; they are bred in the bone, and for the last forty years the intellectual classes of the nation, enervated by wealth or by love of pleasure, or following an erroneous standard of life, have ceased to give in due proportion the men wanted to carry on the ever-growing work of the Empire."

All this tends to show that the marriages of to-day are not only relatively infertile, but, also, either: (1) "That the children born of such marriages are weak, neurotic, specially liable to alcoholism, criminality and insanity, and so far unfit for the battle of life, or (2) that

marriages of the middle and better classes are now so sterile that quite an undue and dangerous proportion of the rising generation is recruited from the lower, the more ignorant, the more vicious and semi-criminal population.

In any case the conclusion is one of the utmost gravity, and almost paralysing in the seriousness of its import. It is indeed a "handwriting on the wall" which claims the fullest and wisest interpretation to be found throughout the Kingdom.

II

We now pass on to the consideration of the cause and life-history of these relatively sterile marriages. Some, and notably M. Arsène Dumont in his work on the age of marriage, profess to consider the elevation of the age when marriage is entered into as mainly responsible for the deficit in the birth-rate. It does undoubtedly account for some of the loss. Obviously, if marriage be deferred until 35 or 40 years of age, there must be less expectation of progeny than in a marriage contracted some ten years earlier. It is, however, idle to suppose that this touches more than the fringe of the nation's loss. The main cause, and we who are in gynæcological practice must know it, is the deliberate prevention of conception. This, which was first encouraged and taught in England some thirty-five years ago, has gradually spread like a blight over the middle-class population of the land, and the true wealth of the nation, the "full-breathed, bright-eyed, and happy-hearted children" of Ruskin, have more or less gone down before it. It is this which has so altered the family life of our country that the most superficial observer of middle or advancing age must be struck by the difference. Instead of the families of six or twelve to eighteen children, we see more often the so-called family of three or two or one, and that which used to be—and still should be—the highest and noblest function of the

married woman, the rearing of sons and daughters to the family, the nation and the Empire, is very largely handed over to the lower classes of our own population and to the Hebrew and the alien.

For a long time it appears to have been assumed that whatever might be the loss to the nation and the race by such a practice, the individual must gain. The avoidance of the troubles of pregnancy, the dangers incidental to parturition, the confinement of the lying-in, the worries of lactation, the expense of another child, and the extra work which this entails—all of this avoided—seems at first to be an undoubted gain to the struggling husband and over-anxious wife, and it would ill become me, with the knowledge I possess, if I failed to appreciate the difficulties of the position or to under-estimate the power of that current advice which seems only to be dictated by common prudence.

But the question arises whether this immunity from pain and trouble may not be too dearly purchased, even by the persons themselves who are primarily concerned.

It would be strange indeed if so unnatural a practice—one so destructive to the best life of the nation—should bring no danger or disease in its wake, and I am convinced, after many years of observation, that both sudden danger and chronic disease may be produced by the methods of prevention very generally employed.

In one or two instances I have known acute peritonitis to immediately follow the use of an injection after sexual intercourse. The cervical canal appears to be often unusually patent at this time, and the danger is neither an unimportant nor isolated one.

In another instance I was consulted for an acute purulent vaginitis directly following the use of a mechanical shield, and as both parties were free from any disease previously, there could be no doubt that the infection or cause of irritation arose from this.

These are casual instances of sudden danger or acute

illness that have come under my own notice, but none the less real and far more common is that chronic impairment of the nervous system which frequently follows the long-continued use of any preventive measures, whether open to hostile criticism or not as immediately dangerous.

This chronic impairment of nervous energy of which I am now speaking, often referred to under the name of neurasthenia, and still more recently under that of "brain-fag," has many causes, and may be produced whenever there has been too great a tax or drain upon the nervous system, and too short a time for real recuperation; but it is especially marked in many of these cases of sexual onanism.

The inability to fix attention, the unreasonable fears, the loss of memory, the loss of emotional control, the mental depression and abject misery often felt by the sufferer—himself or herself—and shown more or less in countenance, word and act, these are symptoms well known to all of us, and symptoms that may be studied exceptionally well perhaps in the school-boy addicted to the habit or vice of self-abuse. With the reform of this habit in the boy, all of these symptoms quickly disappear. It is difficult, therefore, to escape from the conclusion that the storing-up of semen in the male is of value in the economy. It is undoubtedly a source of strength both in man and in the lower animals, and it appears as if the seminal fluid must therefore have some function beyond and in addition to its power in the reproduction of species. Its loss is often followed immediately by loss of strength and staying power, and this loss of strength or vitality after the process of reproduction is noticeable throughout all the animal creation, man being no exception to the general rule.

Further, the artificial injection of "testicular juice" in senility, though a means of treatment by no means free from objection, and one of which I have no personal knowledge, is stated by many competent observers (from

Brown-Séquard to Boy Teissier in the "Twentieth Century Practice of Medicine") to be attended by very marked results, and this, I believe, quite irrespective of the sex of the patient submitted to the treatment.¹

Do we understand the whole of the physiology of the act which often ends in conception? Is it limited, as most have too readily assumed, to the carrying of spermatozoa for the fecundation of the ovum, or is some portion of the fluid retained by the uterus and absorbed?

Modern investigation shows that traces of the seminal fluid may be found quite high in the female genital tract, beyond the confines of the uterus, and the ever-varying mucous surface of the body of the uterus can, as we know, under certain conditions easily absorb septic poisons and mercurial salts.

Beyond this, it is by no means certain that the endometrium and so-called uterine glands are inactive. Except during menstruation there is no visible discharge from the body of the normal uterus, and if the theory of Arthur Johnstone be accepted, that the cavity of the corporeal endometrium is essentially an open lymph-gland, the channel of absorption may be immediate and direct.

It is quite possible, then, that in one or both of these suggested ways some tonic constituent of the seminal fluid may be taken up by the uterus, and thus affect the general organism; and there is nothing unreasonable in the suggestion that such absorption may allay the exhaustion which, without it, is liable to follow the act of connection.

It is very noticeable that exactly the same train of neurasthenic symptoms are nearly always to be observed

¹ Dr. Boy Teissier writes: "I have employed injections of testicular juice in certain cases of irregular and sometimes very advanced senility, and the very favourable results thereby obtained are of such a nature as to make me regard this substance as an agent of real power, the employment of which is rarely contra-indicated."

in the worst cases of cervicitis, where the cervical canal is effectively plugged by thick mucus, and the patient, though married, is temporarily but necessarily sterile. In both cases the resulting imperfect acts of sexual congress appear to be directly harmful.

But apart from this, is the prevention of pregnancy the gain to the woman that so many imagine? It may well be questioned whether in the study of pregnancy sufficient attention has been paid to the period of ovarian rest which appears to accompany the growth of the pregnancy. The raising of the ovaries out of the pelvis into the abdomen, the diversion of the main blood stream for nine months directly to the uterus, and the absence of menstruation, through pregnancy and lactation, argue a time of rest and comparative inactivity for the ovaries which cannot but have an important value in the life of the woman who is married, and at the same time physiologically ready for conception and for pregnancy.

During this time of uterine activity, but of ovarian rest, there is ample opportunity for the nervous supply of the ovary to recover from any undue stimulus, and it is perhaps worthy of notice that this period is usually attended by improvement in general nutrition and increase of fat. This comparative suspension of ovarian activity also coincides with the time when the uterus is filled and unable to retain the secretion of the male.

When this period is fully over it is only reasonable to suppose that the ovaries have gained by this alternation in the sexual apparatus, and that the maturation of the follicle may proceed more healthily, and even the ovum itself may be more perfectly formed, than in the case of a woman in whom this natural cycle has been artificially prevented. In this case the ovaries suffer and the woman suffers with them—far more, as a rule, than she would by repeated child-bearing. Widely as the practice of prevention has spread, you will still have to go to the mothers of large families if you want to point

to the finest and healthiest examples of advanced British matronhood. The natural deduction from this reasoning is, that the artificial production of modern times—the relatively sterile marriage—is an evil thing even to the individuals primarily concerned, injurious not only to the race, but to those who accept it.

Much that I have said regarding the married life of the mothers of our race has a very similar bearing on that of the fathers also. The incomplete act of sexual congress is but slightly removed from that of self-abuse and is open to much the same criticism and strictures. The lower passions are usually stronger in man than in woman, and demand a firmer control. This is encouraged by the natural progress of the healthy married life. The recurring periods of abstinence and restraint induced by each pregnancy, at the confinement and lying-in, not only tend to raise the man himself, but the power obtained by this we may expect (as Prof. Pearson has demonstrated regarding other moral faculties) to be mathematically transmitted to his children.

The increased work and self-sacrifice also necessitated by the growth of the family, the simpler and plainer standard of life corresponding to this, all have their ennobling effect on parents and children. But when the opposite of this obtains then, indeed, there follows not only a moral deterioration of the individual, but a step has been taken reversing the great order of progress from the brute. For then the higher powers of the race, knowledge and the intellectual application of it shown in “prevision” and “precaution” have become systematically subservient to the lower and the animal. And when this is the case decadence has begun.

There is no method of prevention, whether by withdrawal or by the use of injections, or shields, or medicated suppositories, that can be regarded as innocuous.

The health, and especially the mental and moral stamina of those who use these “checks” is slowly under-

mined. The very life of the nations, as we have seen, is seriously imperilled, and there is increasing reason to believe that such isolated children as are "arranged for" and produced under these conditions may themselves suffer and be degraded by their antecedents.

To the evils of disease, race-limitation, or destruction and hereditary weakness which appear to inevitably follow the artificially sterile marriage, we have to add the accompanying evil of a debased and stunted education for the children.

In the most plastic period of the child's life, in its earliest years, the more or less solitary child brought up in a land of solitary children is necessarily isolated and self-centred. Reared in greater comfort or comparative luxury, with no brothers or sisters of similar age to rub off its angles and selfishness, it is ill-prepared for every step of the succeeding battle of life, and it is very generally the child of the larger family and poorer parents, and very often the child of a lower class, who pushes his way in front of him and elbows him to the wall. I have no time to dwell on this, which opens out an important field for further observation and study, but you, gentlemen, who have necessarily been students of human nature all your lives, will know how much there is to bear out every word that I have said.

III.

What will be the outcome for England in the future if nothing be done to check this and allied abuses of so-called modern civilisation? If I shall not weary you with statistics I would ask you to turn your attention for a short time to our sister nation, France, where (as in a magic mirror) one can apparently see the future of those countries in which the birth-rate tends to fall until

the population becomes stationary, or even less than stationary, as it is in France to-day.¹

In a remarkable paper written by M. Alfred Fouillée, of the School of Moral Sciences, in the *Revue des deux Mondes* of January 15, 1897, we find the following account of the criminal statistics of France: "Since 1881—that is, from 1881 to 1896—the number of prisoners before the Correctional tribunals has risen from 210,000 to 240,000. Since 1889—or in seven years—manslaughter has risen from 156 to 189, murder from 195 to 218, and sexual crime from 539 to 651.

"In addition to the general increase in criminality of all kinds, a sort of specialisation of crime, especially for acts of violence, is to be noticed. These belong more and more to a certain class, that of the old offenders. The number of these, which was 30 per cent. in 1850, is now 65 per cent. In short, during the last fifty years criminality has trebled itself in France, although the population has hardly increased at all.

"The saddest side of the criminal statistics is that regarding children and young people. From 1876 to 1880, while the misdemeanours of common law had trebled among the adults, the criminality of youths (from 16 to 24) had quadrupled, that of young girls had nearly trebled, and the number of children prosecuted had doubled. In the period 1880 to 1893 criminality has increased still more rapidly. To-day child-criminality is nearly double that of adults, notwithstanding that minors from 7 to 16 years only represent 7,000,000, while adults amount to more than 20,000,000. In Paris more than half of

¹ "In France during the past year, according to the returns of the Bureau of Vital Statistics, there were 25,998 more deaths than births, and 20,000 fewer births than during the previous year. The record shows only 827,297 births for a population of 39,000,000, though there was a slight increase in the number of marriages, and a slight decrease in the number of divorces."—*Montreal Medical Journal*, December, 1903.

the individuals arrested are under 21, and nearly all have committed the more serious offences." According to M. Adolphe Guillot, the acts of the young prisoners are marked by an exaggerated ferocity, a special refinement of lust, and a bragging of vice that are never met with to the same degree at a more advanced age.

"Child prostitution is growing, and in ten years the number of children charged with prostitution was estimated at 40,000. In 1830 the number of suicides was 5 in 100,000; in 1892 there were 24 to the same number. By 1887 the suicides of children under 16 years (formerly extremely rare) amounted to the number of 55. In 1896 we had 375 suicides of young people between the ages of 16 and 21, and the suicides of children under 16 were 87."

These are facts written by a Frenchman for French readers in the best known French magazine of the day.¹

If we like to extend our inquiry we find that these figures are taken from the national statistics, and are in harmony with other observations. "Since 1880—that is, during the last twenty years—the consumption of alcoholic drink in France has trebled, and France has passed from the seventh place in order of consumption of alcohol to the first." (Mr. Yoxall, M.P.)

The figures in Mulhall's "Dictionary of Statistics," though varying to some extent, are in rough accordance with these. According to this authority, we find that insanity is steadily increasing in France, and that the ratio of suicides has risen from 112 per million in 1880 to 205 (or nearly double) in 1885.

I do not want to press these figures beyond their bare legitimate application. In particular, with regard to alcoholism, this depends on many factors, and is very

¹ A very similar or parallel article on the Increase of Crime in the United States (where "prevention" is exceedingly common) is written by Dr. Buckley in the *Century Magazine* for November, 1903.

much governed by the legislation of the country regarding its sale. In England, for instance, there was a marked diminution in national expenditure after the Early Closing Act of 1872, and in France there has been a great increase since 1880, when, as I understand, the facilities for obtaining it were much increased.

But this does not alter the fact that after half a century of trial with an increasingly limited population France shows more and more a lowered and still falling moral average, a lessening virtue and strength, and an increasing national neurasthenia, which seems to crave and to need the help of constant stimulation in order to face the ordinary routine of life.

Here we see a great nation, a people and a land which, next to my own, I think I understand, appreciate and love better perhaps than any other, and to which I wish nothing but good; but a nation so bound by the fetters she has forged for herself that nothing but the life she has deliberately cast aside could apparently save her from her slow decay.

And is not this refusal of life by the French at the root of the deep anti-Semite feeling which otherwise would be so contrary to the frank spirit of the French? The Hebrew race, to their lasting honour, with very few exceptions, have not only kept themselves free from the vice of which I have been speaking, but, by reason of their laws and customs, are the most systematically temperate in their sexual relations of any nation or people I know.

Consequently, among them, the natural breeding of the better stock has never been interfered with, and in a country like France, the Hebrew seems to rise not only individually, but racially, among the people with whom he has his dwelling, until what appears to be an unfair proportion of responsibility and power and wealth rests in the hands of an alien race. When this is discovered, and the cause of it but dimly recognised, there cannot but be bitter feelings of jealousy and even hatred in

the great mass of the nation among whom the Hebrew dwells, and it is not surprising that the power of combination and of number is sometimes unjustly used to overcome (if possible) the disadvantage.

So far, I have been dealing only with what is open to observation and experience. But may we not reasonably go a step further? What must be the future of such a society if degeneration goes on and the power of the democracy remains as at present or increases? So long as the race progresses the people can be trusted with the powers of Government, but when decadence has been going on for years, or even ages, what can be the final outcome of such democracy but anarchy and confusion?

IV.

In dealing, or attempting to deal, with the treatment of this grave national evil, it is necessary to take a broad and yet sympathetic view of the problem.

It is one belonging essentially to the higher gynæcology, in which no false sympathy or lower obstetric platform must be permitted to interfere with what is really best for the individual and the race. And yet when we recognise that the whole force of modern civilisation, its honour paid to riches, its luxury, its frivolity, its impatience, its society, its manner of life, its very "neurasthenia," seems all more or less opposed to the cultivation of that true family life which is its best safeguard against decay, one needs indeed to temper judgment with a quick appreciation of all the difficulties encountered by every modern wife and mother, and to recognise the almost insurmountable obstacles for the Church, the State, and the Profession of Medicine to slowly overcome.

For I think the help of all is needed. The Roman Catholic Church teaches that prevention is a sin, and though this is altogether beyond my province, I would submit that no lower standard of sexual morality should

be allowed by those who belong to another communion, and that every effort should be made by the religious and the moralist to inculcate a higher ideal and a plainer and simpler standard of life.

In the State it might be possible to encourage this higher ideal by regarding the well brought-up family as one of the attendant qualifications for high distinction and honour, and, in addition, by some wide scheme of old-age insurance or pension, by better facilities for the higher education of children, and by some special remission of taxation to lighten the burdens of those who are bringing up large families to be a credit to themselves, and a lasting benefit to the nation.

Again, where further education is demanded, and legitimately demanded, by any profession or calling as necessary to full qualification, I would have the State rather jealously guard the earliest possible date at which productive work may begin. Part of the difficulties of our modern life seems to be caused by the ever-receding age at which such work is possible. In my own student-days many of us qualified at 21, were earning our own living at 22, and yet managed to keep up study and hospital attendance until taking the higher degrees at 25 or 26. This may have been mistaken, but I am convinced it is a far greater mistake to keep a young man, with a man's vigour and ambition, from any real independent work through most of the years from 20 to 30.

In the Medical Profession itself the evils of prevention, both immediate and remote, should be studied more closely, and explained to such patients as need direction and advice. No advice should be given in favour of it without special consideration of the subject in all its bearings and due consultation.

My own opinion is that while occasional abstinence in married life is perfectly allowable and may have, as I have suggested, a high moral hereditary value, no artificial prevention is advisable save that which is produced

by operation, when deformity or grave disease imperatively demands it.

Certainly in the present day when septic diseases, as we know, can be reduced to a minimum and should be almost entirely avoided, when surgery can so effectually and safely deal with nearly every kind of difficult or dangerous labour, it is not the time for the fairly healthy parents of one child to shelter themselves behind the terrors and troubles of a first confinement, and demand some easy but evil way of further immunity.

But as civilisation increases, there can be little doubt that the susceptibility to pain increases also, and it may be that the mothers of to-day need a greater consideration and help, during the progress of pregnancy and lactation, than the mothers of former years. Very much more may be done during these periods by suitable advice, management, and diet than many imagine. In some cases, as I showed last year, repeatedly disastrous pregnancies may be changed into ones of healthy type and character solely by what amounts to a special and more liberal dietary before and during pregnancy;¹ and much of the partial collapse and ill-health that is apt to follow parturition and accompany lactation may be modified or altogether avoided by due provision and direction for the hygienic requirements of mother and child, particularly as regards rest and food.

In these ways, and especially by personal influence and example, the medical practitioner may do more perhaps than anyone else to reform the judgment and correct the practice of this and coming generations.

But when all this is said and done, there still seems to be needed some general awakening of the national conscience if any thorough and lasting change is to be hoped for. Let us be careful that the awakening is in the right direction.

¹ *British Medical Journal*, April 11, 1903.

One word of caution may be needed. Whatever may be the merits or demerits of celibacy as compared with marriage, statistics show, as I have already stated, that it has but very little practical bearing on the subject before us. "The birth-loss in the United Kingdom must be due to causes operating in the married life of its inhabitants." True celibacy, maintained, as it often is, for the sake of the better service of mankind, is worthy of the highest honour and may well be subject to a higher law than that of physiological increase. Many noted examples of this will occur to all as I speak, in every profession and of both sexes. These are vicarious fathers and mothers whose children far out-number the limits of a physiological family, and the lives they protect or encourage or save make for that "maximum of life" which is associated with the "maximum of virtue."

There is no reason to fear any high ideal of chastity or continence, and especially none when it is associated with the care of those forces which go for the defence of the nation and that child-life which is its future hope.

On the other hand, there is every reason to fear that debased ideal of married life which is secretly and insidiously working for the ruin of the nation's power and for the destruction of its hope.

Artificial prevention as an evil and disgrace—the immorality of it, the degradation of succeeding generations by it, their domination or subjection by strangers who are stronger because they have not given way to it, the curses that must assuredly follow the parents of decadence who started it—all of this needs to be brought home to the minds of those who have thoughtlessly or ignorantly accepted it. For it is undoubtedly to this that we have to attribute not only the diminishing birth-rate, but the diminishing value of our population.

No truer words were ever said than those by Ruskin: "The maximum of life can only be reached by the maximum of virtue." Do they not carry with them another

truth which has now become almost a demonstrable fact. that the prevention of life is always accompanied by moral deterioration ?

And this evil harvest, for ourselves and for our children, is of our own sowing. Some, looking back on past history and bygone civilisations, have imagined that the rise and fall of empire follows some unalterable law, and that nations, like individuals, must necessarily suffer from senility and decay.

But it is not so. National decay or degeneration is by no means the inevitable consequences of age. Our modern ally, Japan, is an evidence of this. After a long and chequered history, quite as long or longer than our own, she has emerged in all the activity and strength of a second youth.

And it is interesting to note that this new-found power is directly associated in the mind of the Japanese with the knowledge of their own racial strength and power of increase ; indeed, it is this which gives them—youth.

This is well shown by some recent remarks of one of their more prominent men. He writes : “ Japan is in no danger of race-suicide. . . . The mothers are not shirking maternity as in other lands, and the result is that we can spare half a million of men a year for an indefinite number of years and not miss them.

“ Barring Formosa and the Pescadores, we have less than 150,000 square miles of territory, of which eleventh-twelfths is unproductive of food. Nevertheless we have close to 50,000,000 folk to feed. Do you wonder that we are land-hungry—that we want elbow-room ?” (Reported by Stephen England in the *Daily Mail* of December 23, 1903.)

In a somewhat different way the Hebrew race, to whom I have already referred, may also be cited as an example of an ancient people, old in every sense, and still not dying out. Conquest and dispersion have left their ineffaceable impress on the race, but they are with us to-day, not in-

frequently showing evident traces of centuries upon centuries of nervous training and development, of nervous wear and tear; possessing, too, a history of great achievement in music, art, and literature, corresponding to that development, and yet showing, so far as I am able to ascertain, no sign of real decay or loss of reproductive energy.

We have the same power with far better opportunities and a much brighter outlook. At no period in our history, perhaps, was there less reason for racial suicide, and, apart from this, for pessimism. All of us, both men and women, need a truer and braver conception of life. Life is entrusted to us—life and the power of life—and we should be ready to work, to suffer and to adventure greatly and cheerfully, for the honourable and wise employment of the entrusted capital.

“ Then welcome each rebuff
That turns Earth's smoothness rough.
Each sting that bids, nor sit, nor stand, but go.
Be our joys three parts pain!
Strive and hold cheap the strain;
Learn, nor account the pang; dare, never grudge the throe.”

I must confess when I hear of thoughtful men among the Boers in South Africa, military authorities in St. Petersburg, and Japanese in far Japan, noticing and counting on their own racial increase, and comparing this, kindly or unkindly, with our own comparative stagnation, I would like, if I could, to sting my fellow countrymen into some proportionate sense of shame and duty.

My voice is weak, but in the responsible position in which you have so generously placed me, as the temporary head of a great British Society, which may well claim to be the greatest British authority on such questions, I am surely not overstepping my province if I ask for the grave interest of every Fellow in this important subject; if I ask, not so much for any following of my leadership as for the fullest independent investigation

into all the facts, figures and arguments I have brought before you. For with us lies a great responsibility, and ours will be to a very large extent the blame if, in after years, the lamp of the Anglo-Saxon is found to be burning dimly.

Dr. HEYWOOD SMITH proposed that a vote of thanks be given to Prof. Taylor for the masterly address, and that it be published in the Transactions of the Society. The attention of the whole nation should be drawn to this most serious question, and he thought it would be well to have it printed and brought definitely before the Government, and circulated among members of Parliament. He was quite sure that, if unchecked, the evil which it put before them would go on spreading, and he thought that the British nation should set an example to the others in trying to arrest it.

Dr. MACNAUGHTON-JONES, in seconding the motion, said he thought it a great honour to the British Gynæcological Society that Professor Taylor, coming as he did from the Midlands, which were associated with such well-known names as Clay, Lawson Tait, and others, should occupy their Chair. The subject brought before them was one which touched the physical, moral, and intellectual welfare of the country, for as so lucidly exposed in the address, crime, lunacy, alcoholism, and other evils tending towards the deterioration of the race were undoubtedly intimately connected with the matter. He thought the Fellows of the Society were additionally indebted to the President for breaking new ground in his address. In medical matters they were to a certain extent responsible for the safety of the national health, and Professor Taylor had shown them a direction in which it was in their power to fulfil that function.

Professor TAYLOR, in responding to the vote of thanks, said the subject of his address had occupied his thoughts and attention for many years past. He added a hope that the Society might have a useful and prosperous year.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, MARCH 10, 1904.

PROFESSOR JOHN W. TAYLOR, M.D., F.R.C.S., PRESIDENT, IN
THE CHAIR.

SPECIMENS AND CASES.

By request of the author, Dr. H. Macnaughton-Jones read the following notes accompanying the two specimens :—

NOTES OF A CASE OF SUCCESSFUL HYSTERO-SALPINGO-OÖPHORECTOMY FOR PELVIC SUPPURATION. By T. GELSTON ATKINS, M.D., M.Ch., Surgeon to the South Charitable Infirmary and County Hospital, Cork.

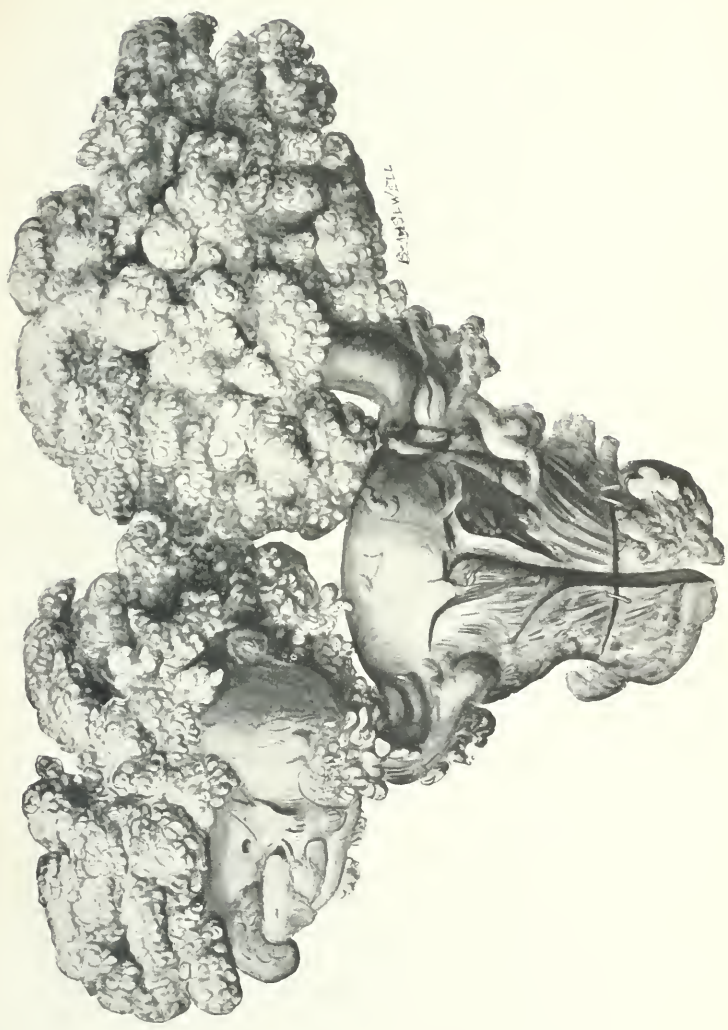
Mrs. L., a woman aged about 35, consulted me in October, 1903, stating that early in January she had been confined of a large male child after a slow labour. All seemed to go on well for the first five days, when she had a shivering attack with acute pain in her left side. After some days of very severe pain she felt something give way, a gush of discharge took place, and she felt greatly relieved. She remained in bed for six weeks, during which time the discharge diminished considerably, but never ceased, and when I saw her early in October, and made a vaginal examination, a torrent of pus, fully one pint, was passed, and could be seen coming out of the os uteri. On each side of the uterus there was a swelling, and pressure on either of these caused the pus to flow more abundantly. It was therefore clear that there were pus sacs communicating with the uterus. A Sims's probe could be easily made to enter the sac on the left side, but not the one on the right. I therefore concluded that these

sacs were either pus tubes or broad ligament or ovarian abscesses opening directly into the uterus, and advised an exploration and the adoption of the proper course when the exact condition was made out. On opening the abdomen, I found that the omentum was adherent all round, and presented the appearance of a cover to the pelvic roof. When this had been tied off, the swellings were seen to be the ovaries embedded in a dense mass of adhesions to the bladder, bowel, uterus and pelvic walls, and it was evident that nothing short of clearing out the pelvis would be of any use. This proved to be a very difficult proceeding, as the tubes and ovaries had literally to be dug out of the dense mass of adhesions. The first step consisted in tying the ovarian arteries; the bladder was then detached from the uterus, and the separation of all the adhesions was completed by working *upwards from below*; total hysterectomy was preferred to supra-vaginal, as the cervix seemed to be infected, though examination proved that the pus from the abscesses was sterile. The patient made an uneventful recovery, and left the hospital quite well in four weeks. Referring to the specimen, the opening of the abscesses, into which a bristle is passed, can be seen in the uterine canal. The case is the first of the kind that I have seen, and I believe, from the literature I can lay hands on, that the condition is a very rare one. It is an interesting question how both ovaries became infected. From the severity of the puerperal attack the infection must have been streptococcic, and it must have passed through the uterus and tubes and lodged in the ovaries, but there is no sign that either uterus or tubes were involved. If the mode of infection had been through the lymphatics, through the uterine wall and parametrium, one would have expected an endometritis or metritis, and then a parametritis. From the extent and density of the adhesions there had evidently been a considerable amount of pelvic peritonitis.

NOTES ON A CASE OF HYSTERO-SALPINGO-OÖPHORECTOMY
FOR DOUBLE OVARIAN PAPILOMA AND CARCINOMA
OF THE CERVIX UTERI. By T. GELSTON ATKINS,
M.D., M.Ch.

Mrs. C., aged 53, was admitted under my care to the South Infirmiry, on December 6, 1903; she had been kindly sent by Dr. Orpin, of Youghal, with a diagnosis of uterine cancer. He had only seen her a few days before, but feeling sure of his diagnosis, sent her to hospital. On admission, she was greatly attenuated and pallid, and complained of shortness of breath and general abdominal discomfort. Her pulse was 150, and the vessel was not well filled. She stated that she had had a coloured discharge for three or four weeks, but otherwise, except for the gradual abdominal enlargement, she had no symptoms. There was ascites, and two large growths could be felt, one in each iliac region, which were freely movable in the ascitic fluid. The cervix was hardish, with a patulous os which bled easily. A scraping of the cervical canal gave unmistakable evidence of malignant disease. There did not seem to be any adhesions. A few days' observation showed that she had decided tachycardia. The urine was normal. I decided to explore, and on opening the abdomen, a large quantity of ascitic fluid came away, and the swellings in the pelvis floated up into the abdominal incision, and proved to be malignant papillomata. I therefore determined to remove them and the uterus, which I did by the ordinary operation of hystero-salpingo-oöphorectomy, as in the preceding case, without meeting any difficulties. She bore the operation well, but her pulse remained between 150 and 160, and her temperature was from 99° to 99·6° F. For the first seven days she seemed to be making an uneventful recovery, and on reference to the hospital notes, I find that on the fifth day she had boiled fish, light food which she digested well, the bowels moving regularly. On the evening of the seventh day her breathing quite suddenly became

PLATE I.



Double ovarian papilloma and cervical carcinoma. (T. Gelston Atkins.)



PLATE II.



Uterus and adnexa (posterior surface) removed by abdominal panhysterectomy. The pus sacs and ovaries are incorporated with the uterus; there was a direct communication between the pus sacs and the uterine cavity. The right tube is seen detached from the adhesions which united it to the right adnexal mass. (T. Gelston Atkins.)

very irregular, short and jerking, and the pulse rose to 165. On the eighth day, when the stitches were removed, the abdominal wound was quite healed and aseptic, but the rapid breathing and pulse never went down, and she died on the night of the ninth day after the operation. The cause of death was in no way connected with septic processes, but simply due to the tachycardia. The specimen is a beautiful example of double papilloma—of the ovaries, and of cancer of the cervix. It is an interesting point whether the cervical cancer was due to infection from the ovaries.

Dr. MACNAUGHTON-JONES remarked that, seeing how frequently papilloma of the ovary partook of the nature of adeno-carcinoma or carcinoma, or was associated with such disease, he was not surprised at the cervix being cancerous in this instance. As regarded the source of infection in the other case, the occurrence of suppuration of the adnexa during pregnancy or childbed was uncommon and difficult to account for; it was no doubt in some instances due to latent gonorrhœal infection or other disease of the tube or ovary present before pregnancy.

The PRESIDENT said that Dr. Atkins was to be warmly congratulated upon his successful operation. It was a very bold undertaking to remove the uterus and ovaries in the condition described by him.

Dr. WILLIAM DUNCAN thought the question whether the papilloma was the source of the cancer of the cervix was a very pertinent one. He had never seen the two conditions associated.

Dr. INGLIS PARSONS said that the combination must be a very rare one, as he had never met with it.

Dr. WILLIAM DUNCAN exhibited the following specimens: (1) Fibroid uterus removed by vaginal hysterectomy after enucleation had failed. (2) Fibroid of the vaginal wall. (3) Uterine myoma growing between the

layers of the broad ligament, and completely filling the pelvic cavity; hysterectomy; recovery. He read the following notes:—

LARGE UTERINE MYOMA IN THE LEFT BROAD LIGAMENT,
COMPLETELY FILLING THE PELVIC CAVITY—HYSTEREC-
TOMY—RECOVERY.

The patient, aged 53, was seen by me in consultation with Dr. Tom Godfrey, of Finchley. Married in 1875, she had had seven children, the youngest aged 13, and five miscarriages, the last two years ago. The catamenia were regular up to 1902, when they began to be erratic, and sometimes a flooding took place; the patient also complained of much backache and frequent micturition. On examination, a central firm tumour could be felt extending upwards midway between pubes and umbilicus, and, *per vaginam*, a tumour was felt, filling the pelvic cavity and displacing the cervix downwards and to the right. This tumour was evidently part of the one felt in the abdomen, and movement of it moved the cervix. The sound was not passed.

Hysterectomy was recommended, and was performed on September 24, 1903. When the abdomen was opened, the tumour was found to be attached to the posterior wall of the uterus, and to be growing between the folds of the left broad ligament. The ligament was incised and the tumour, with some difficulty, shelled out of the pelvic cavity; the ovarian and uterine arteries were secured in the usual way; the left ovary only was removed.

The cervix was divided in the usual way, and a huge cavity could then be seen extending between the layers of the broad ligament down to the floor of the pelvis.

After all the oozing vessels had been secured, the walls of this cavity were whipped together, from below upwards, by a continuous suture of fine silk, the peritoneal flaps were united over the stump of the cervix, and the abdominal wound was closed with three layers of suture, fine

silk for the peritoneum, interrupted silkworm-gut sutures for the sheath of the recti muscles, and strong continuous silk suture for the skin.

The patient made an absolutely uneventful recovery, without rise of temperature, sickness, or trouble of any kind, and now, five months after the operation, feels perfectly well and can take long walks without fatigue.

The interest of this case lies in the manner of closing the large cavity left between the layers of the broad ligament after the tumour had been removed, a method which is infinitely better and safer than packing with iodoform gauze, as recommended by some operators.

Dr. INGLIS PARSONS exhibited three uterine tumours and read the following notes:—

I.—FIBROCYSTIC TUMOUR OF THE UTERUS.

The patient, a single woman, aged 40, complained of difficulty in passing water for the last three years, and, latterly, of complete retention, necessitating the use of the catheter. For the last eighteen months she had noticed a swelling in her abdomen, accompanied by pain. Her menstruation had been regular, every twenty-eight days, lasting for five days and very free and painful for the first three days.

Dr. Cameron, the house surgeon, described the abdomen as much distended by a large tumour with a more or less uniform surface, movable and not tender, of a doughy consistence, and with a contour like a bullock's heart, such as Professor Murdoch Cameron has described to be characteristic of fibrocystic tumours. The cervix was obliterated and almost the whole of the lower pelvis was filled by the tumour. The sound, passed with some difficulty, showed the uterine cavity to be seven inches long.

On opening the abdomen on January 12, 1904, I found the pouch of Douglas entirely obliterated, the peritoneum

which usually forms it, with part of the rectum and sigmoid flexure, lying on the back of the tumour. After tying off the broad ligament at each side, and removing the appendages, as both ovaries were diseased, I cut through the peritoneum on the posterior wall and stripped it and the bowel down away from the tumour, until I came to a point where it was firmly adherent.

The round ligaments were then tied, and the anterior layer of the peritoneum cut across from side to side and stripped down, taking the bladder with it. The sides of the tumour were then carefully examined, and, as the ureters seemed to be below, both uterine arteries were tied. The tumour was then cut across low down and removed, a piece of the adherent capsule being left on the bowel. Finally, the remains of the cervix containing a portion of the tumour were completely removed, thus opening the vagina. One or two small vessels had to be tied. The vagina was then closed by a mattress suture and the anterior and posterior flaps of peritoneum were united by a continuous silk suture, though, on account of the adhesions on the right side, there was not enough of the posterior flap to meet the anterior. The abdominal wall was united in three layers. The patient made an uninterrupted recovery without a single bad symptom.

I have brought this case forward because fibrocystic tumours are rare in women of 40 and, on account of the amount of the growth in the lower part of the pelvis, the removal of the tumour presented unusual difficulty, and also, because Dr. Cameron, the house surgeon, made a correct diagnosis based on his father's observation of the bullock's heart shape of fibrocystic tumours.

II.—LARGE FIBROMA OF THE BROAD LIGAMENT.

The patient, a single woman, aged 35, for two years had suffered from pelvic pain, especially at her menstrual periods, which were regular, and lasted three days with a scanty discharge.

On examination, a large tumour was found filling the pelvis and extending above the pubes. It was hard, nodular and movable, and gave a sense of fluctuation. The uterus, displaced upwards and to the right, was normal in size, the sound passing 2.5 inches. Abdominal section, on February 23, 1904, showed that the tumour was a large fibromyoma of the right broad ligament. After tying the left ovarian and uterine arteries in the usual way, and tying the right broad ligament, the peritoneum was cut across before and behind the tumour, and the flaps stripped downwards; the cervix was then divided from the left side until the right uterine artery was exposed, and when this vessel had been caught and tied by Dr. Bonney, who was assisting me, the tumour was rolled up out of its bed. In doing this the bladder, which was closely adherent to the tumour, was unavoidably opened, and a large raw space was left in the bed of the tumour, from which there was a great deal of oozing. After several small vessels had been secured and the oozing checked by hot sponges, this space was brought together with fine silk and the bladder sewn up. The peritoneum was then united, and the wound closed. A soft rubber catheter was kept in the bladder. Three hours after the operation the patient collapsed from shock, but Mr. Rose, the house surgeon, promptly transfused a pint and a half of saline fluid, and injected $\frac{1}{15}$ gr. of strychnine. The bladder was drained for ten days, and beyond passing some blood in her urine, she has had no bad symptoms. She can now retain her water for some hours, and in a few days will be able to get up.

III.—SUBMUCOUS MYOMA.

The patient, aged 31, married for eighteen months, but childless, was sent to me by Dr. Lauchlan on account of profuse menorrhagia of four or five years' duration. She was very anæmic from loss of blood, and on examination, I found a large, hard, irregular, nodular swelling

involving and forming part of the uterus, and reaching to the umbilicus; the sound passed 4.5 inches.

On February 23, 1904, I performed a supravaginal hysterectomy, removing the left ovary, which was diseased, but leaving the other. The patient made a good recovery, and was able to sit up on March 10.

Mr. BOWREMANN JESSETT dissented from Dr. Duncan's opinion about closing such a cavity as the one described. His own practice was to put some gauze into the cavity, bring the gauze through a drainage tube into the vagina, and withdraw them both on the second or third day.

Dr. J. J. MACAN, in relation to the absence of any capsule and the general condition of fibrosis of the uterus, described by Dr. Duncan, drew attention to a recent discussion in the French Surgical Society, on a paper by Richelot on malignant degeneration of the stump after supravaginal hysterectomy, in which he insisted that uterine sclerosis, of which fibromata were merely incidental modifications, was an initial stage preceding cancerous degeneration. An epitome of the paper and discussion, prolonged over six meetings of the Society, would be found in the February number of the Society's *JOURNAL* (Summary, p. 186).

The PRESIDENT remarked, in regard to enucleation, that when there was a good capsule and no sepsis there was no reason that course should not be adopted if it could be carried out without difficulty, but in a case such as the one described, especially where there was sepsis, it was infinitely better to remove the uterus altogether, as Dr. Duncan had done, with marked success. As to myomata of the vaginal wall, he (the President) had met with five or six, most of them in the anterior wall. The largest was close to the cervix; the others were near the urethra, and in enucleating one of these there was some risk of damaging the urethra. Cavities such as those left by the removal of a tumour of the broad liga-

ment he had himself been in the habit of draining with iodoform gauze without any tube.

Dr. DUNCAN, in reply, said in regard to the possibility of enucleating the tumour from the broad ligament, the uterus was a fibroid one, and the patient was over 50 years of age, there was no extra risk in removing the uterus, and the patient was left in a much better condition than if it had been allowed to remain. He upheld his own method of treating the cavity, from which, in his own experience, and in that of others, he had never known of any ill result, always provided care was taken to arrest all oozing before whipping the sides of the cavity together, and considered it a far safer proceeding than draining into the vagina, and thereby risking septic infection.

Mr. CHARLES RYALL said he thought it was a pity that the specimens brought before them from time to time were not classified and shown together, so that they might have some idea of various operators' methods in similar cases. As to Dr. Parsons' remark about drainage keeping the so-called abdominal cavity open, he had always regarded draining in such cases as hæmorrhagic oozing, following breaking down of adhesions, or enucleation of tumours as the safest course to follow in gynæcological operations. He was not at all in favour of drainage through the usual suprapubic abdominal incision, and always preferred the vaginal route, and in fact he had never yet come across a case where he regretted carrying out this latter procedure; but such was not his experience with former methods of abdominal drainage.

Dr. MACNAUGHTON-JONES remarked that there had been much divergence of opinion as to the pathogenesis of fibrocystic tumours. The cyst may be due to (1) the deliquescence of a portion of a fibroma; or (2) the dilatation of the lymphatics and the formation of sinuses at the extremities of the lymph vessels. The first of these views was accepted by Virchow. Klebs attributed them to hydropsia and œdema. The view of lymphatic

dilatation was advocated by Billroth and Koeberle, the lymphangiomatous nature of the tumour lending force to the supposition, as also the rich peripheral supply of lymphatics. Dr. Mary Dixon Jones, who has recently discussed the subject, does not accept this explanation, and she regards the new cystic formations as a consequence of medullary changes in the tissues, and new formations eventuating from this medullary condition. The cyst is a development from the medullary material. She takes the view that a fibroid tumour is a diseased condition arising out of an inflammatory corpuscular change in the tissues of the uterus; that fibroid tumours do not cause degeneration, but that the degeneration arises from the secondary processes of disease developed in the tumour or in the uterus; and, further, she believes that infection of the adnexa is carried from the tumour to the ovaries and tube. She supports her contention by a number of microscopical researches into the nature of fibrocystic degeneration, in which she found inflammatory changes in the tissues associated with sinuous cystic canals or irregular cavities, sometimes with the presence of granules and inflammatory corpuscles, sometimes with osseous degeneration, at others with pus. In some the changes partook of the endotheliomatous nature, and the blood cysts were present.

Dr. INGLIS PARSONS thought that the gelatinous matter in fibrocystic tumours resembled that found in malignant ovarian cysts, and that it would probably be found some day that it was due to micro-organisms, as it is a well-ascertained fact that gelatinous material in large masses is formed by certain saccharomyces in symbiosis with certain bacteria.

Dr. BEDFORD FENWICK read the following notes and exhibited the specimen :—

A FIBROID UTERUS REMOVED FOR MENORRHAGIA.

The patient was a governess, single, aged 33. Her catamenia had been established at 14, and had been

regular, lasting four or five days with normal loss and without pain, until two years ago, when they began to be more protracted with more discharge. For the last nine months the periods have lasted from eight to ten days, the discharge has gradually become more profuse, and large and small clots have been passed with great straining pain; for the last month the loss has been almost continuous. She has, for some months, been suffering from increasing giddiness, muscular weakness, dimness of sight, palpitation, dyspnoea, and faintness on exertion. When she was sent to me, on February 10, 1904, her skin and mucous membrane were waxy and yellowish; her pulse was 120; her first heart sound was almost inaudible at the apex, which was most perceptible in the nipple line. The cervix was small with a pin-hole os; the uterus was slightly enlarged, soft and mobile; the ovaries and tubes felt normal. She was at once admitted into the Hospital for Women, Soho Square, and after a week's absolute rest, I dilated the cervix, and found several fibroid growths in the canal too deeply situated to be enucleated with safety. On March 8, I therefore performed hysterectomy, leaving the ovaries, as they were perfectly healthy. This afternoon, only forty-eight hours after the operation, her pulse is only 75, and there is a faint tinge of colour in her lips and eyelids. The case is interesting because the uterus measures only three inches in length by two and a quarter in thickness, but it is simply studded with small fibroid nodules, and the canal is full of submucous growth. I may call special attention to the facts that there are no growths at the cornua of the uterus, and that the ovaries and tubes are perfectly healthy, which supports the theory I have advanced that the disease of the appendages, so frequently found associated with uterine fibroids, is due to the presence of such growths at the fundus causing hypertrophy of the ovarian arteries and consequent hyperæmia of the ovaries and tubes, a condition which is certainly an ordinary antecedent to chronic disease and degeneration of structure.

Dr. DUNCAN said that the appearance of the specimen suggested to him that there might be malignant disease, and he thought that a proper pathological report would be of much value, as the case was most interesting.

Mr. BOWREMAN JESSETT concurred, and on the invitation of the President—

Dr. FENWICK undertook to have a pathological report prepared, and bring it before the Society on some future occasion. In reply to Dr. Heywood Smith, he said that on introducing the sound he could feel it quite distinctly pass over the nodule; there was no question as to the presence of intrauterine growth.

PAPER.

CHLOROFORM IN SURGICAL ANÆSTHESIA: THE VERNON HARCOURT INHALER AND EXACT PERCENTAGE VAPOURS.
By DUDLEY W. BUXTON, M.D., B.S., M.R.C.P., Anæsthetist and Lecturer on Anæsthetics in University College Hospital.

The apparatus which I have been asked to explain to you this evening owes its origin to the ingenuity of Mr. A. Vernon Harcourt, F.R.S., sometime Reader in Chemistry at Christ Church, Oxford. The British Medical Association in 1901 appointed a Committee, of which I was a member, to carry out certain investigations with regard to chloroform, and Mr. Vernon Harcourt was co-opted a member of that Committee. In the course of our investigations, it became apparent that we must obtain some method of exactitude by which we could ensure a definite amount of chloroform being delivered, in other words, a definite dosage by a known percentage of chloroform vapour in air. Now, in 1899 Mr. Vernon Harcourt published, in the *Transactions of the Chemical Society*, a description of a method whereby a current of air could be mixed with any desired proportion of chloroform

vapour. This method was, however, only applicable to small animals, and was supplemented in June, 1902, by a communication by Mr. Harcourt to the Royal Society. In the paper in question reference is made to two methods, both of which were demonstrated before the Committee of the British Medical Association, and the second was adopted by them, after various experiments and trials, as being applicable to human beings.¹ The apparatus shown to-night is the outcome of these experiments, and is a remarkably ingenious application of chemico-physics to the service of suffering humanity.

While the Committee of the British Medical Association were studying the accepted methods and apparatus for giving chloroform. I was requested to report upon various inhalers, and among them upon Mr. Vernon Harcourt's Chloroform Regulator. Let me, before going into detail, explain that the principle of this apparatus is that air passes over the surface of chloroform by the aspiration of the patient's respiration, and that by its construction the apparatus delivers a maximum strength of 2 per cent. I was first uncertain whether this 2 per cent. strength would satisfy the requirements of surgery, although possibly adequate for physiological work. Probably those of you who have not used, or seen the apparatus used, will be inclined to take this view. I mention my own mental attitude at the commencement of my research. However, experience has convinced me that, like many theories based on *à priori* reasoning, this one is entirely wrong. The great bugbear of this chloroform question has always been *à priori* reasoning, coupled with a confiding faith that chloroform as an anæsthetic obeyed no laws like other drugs. Like the blessed word "Mesopotamia," the much-abused word

¹ Mr. Harcourt formulated a Report on these methods, which the Committee duly presented to the British Medical Association. See *Brit. Med. Journ.*, July 18, 1903, cxlii.

“idiosyncrasy,” has consoled many an aching heart and ministered to the *amour propre* of not a few chloroformists.

But if you will bear with me, I hope to convince you that there is overwhelming evidence in favour of the statement that chloroform is not only a most law-abiding body, but is impeccable in the matter of idiosyncrasy, while no evidence exists in support of the contrary view save various *ipse dixits*, which are inadmissible as against definite experimental and clinical observations.

Snow, who in 1858 was the voice of one crying in the wilderness of inexact experimentation, conducted researches on chloroform, which succeeding workers have elaborated and confirmed, but have not disproved. His conclusions were that 12 minims of chloroform in the body produces the second degree of narcosis; 18 minims the third degree, 24 minims the fourth degree, and 36 minims the fifth degree. Thus 18 minims is 2 per cent., 36 minims equals 4 per cent. (Fluids of body, 30 lbs. equals 15 litres, or 300 litres of vapour in 15,000. The figures are given by Waller, *Brit. Med. Journ.*, April 23, 1898, p. 1059.)

Paul Bert, although working on somewhat different lines, and without any knowledge of Snow's views, arrived at the same figures; *i.e.*, 2 per cent. vapour will produce anæsthesia. It is true that Snow speaks of a safe 5 per cent. vapour, but his methods of giving chloroform were so inexact that the actual vapour inhaled was never anything like the dangerous 5 per cent. spoken of.

When Clover adopted a dosage method of giving chloroform, he fixed his maximum at 4.5 per cent., which was too dangerous for operations lasting any time, and even in his skilled hands actually proved fatal. His, like other methods based upon the principle of mixing large quantities of air and chloroform vapour, was fallacious. In the first place, the gases do not remain equally intermingled, and the heavy chloroform vapour sinks, so that the first portion inhaled possesses a lower tension than the last.

An apparatus I have seen used in France, invented by

Dr. Dubois, and which was described in the press recently by Dr. Waller, who showed it in London and at Hereford, gives a 2 per cent. vapour, and produces anæsthesia.

Thus we see that experiment shows 2 per cent. of chloroform vapour is safe, and clinical experience reveals that it is effectual certainly in some cases.

Further, we may dismiss most of the methods suggested, such as are inapplicable for general use on account either of their inaccuracy or, in the case of Dubois' machine, as being too cumbersome and costly.

The next question is—What are the requirements of the surgeons of to-day, and how far can these requirements be met by low-tensioned chloroform vapours? All admit it is a very different matter to undertake the conduct of the anæsthetic for the more serious operations in vogue at the present time than it was in the case of such surgical proceedings as were performed a generation or so back. The anæsthetist is expected not only to make and keep his patient unconscious, but he is asked to insure muscular relaxation, and the abeyance of as many of the reflexes as is consistent with his patient's ultimate recovery. Indeed, in many instances, the inability of the chloroformist to accomplish this must result in the failure of the operation and jeopardise the patient's chances of after-recovery.

You ask, then, Can 2 per cent. of chloroform vapour effect this? And I am bound to say that, with Mr. Harcourt's inhaler I must answer, It will do so. But before I tell you in a few words what I have done with it, I am anxious to point out what will explain the apparent discrepancy between myself and others with regard to "light" and "deep" narcosis. In the teaching and in many of the books of trustworthy men, you will find that they emphatically caution against "light anæsthesia," and point out the many reflex dangers liable to accrue if their directions are unheeded. I am convinced, however, that a common, if not general, misapprehension exists

with regard to so-called "light anæsthesia." It is this. The patients who reveal these reflex troubles are not anæsthetised at all. There are two conditions: one is *incomplete* or *irregular narcosis* or anæsthesia, and the other is *light anæsthesia*, and these are absolutely different things. In practically all cases the patient must pass definitely into the third degree of narcosis before the anæsthesia is complete. Then, and not until then, if in the view of the anæsthetist a light phase of anæsthesia is best for the patient, and is sufficient for the requirements of the surgeon, the anæsthetist can, by lessening the dosage of the anæsthetic, diminish the depth of the narcosis without running any risk of reflex dangers. He will, of course, have to expect the phenomena characteristic of the particular phase of narcosis, but of none other. The incomplete anæsthesia is the type one commonly hears of, and sometimes sees, in the hospitals among learners. The patient is hurried often with a too strong vapour of chloroform into a drugged state. the mixture of chloroform in the blood stream is irregular, some tissues are over-dosed, others are under-dosed. The operation is commenced and the patient moves or vomits, then the anæsthetic is pushed, and disaster may, and commonly does, occur.

Will you forgive me if I pursue this matter a little further and compare the physiology of "incomplete" with "light" narcosis?

We have to deal with the vasomotor system, the lungs, their nerve mechanism, the pulmonary circulation, the heart, and the vagus control. To insure safety, all these must work in harmony. What may occur, however, and I am afraid often does occur, is that in this irregular anæsthetisation—first one strength then another—the machinery is put out of gear.

The work of McWilliam has recently been extended by Miss Sowton and Professor Sherrington, and we now know by their research on the isolated mammalian heart

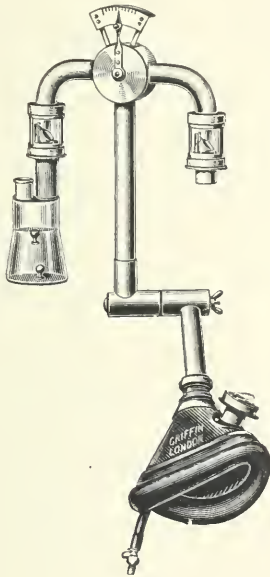
that not only does the heart undergo acute dilatation when chloroform perfuses the coronary vessels, but that even 1 in 100,000 in artificial circulating fluid produces a weakening of both the auricular and ventricular beats by 30 per cent. and 49 per cent. When more concentrated solutions were perfused the effects were even more marked, and were ultimately destructive to the structure of the muscle. But equally important researches in this connection are those of Rudolph and Embley, who have independently worked out the part played by the vagus control in chloroform narcosis. The first point is that the vagal centre becomes unduly irritable under chloroform, and the more so when the vapour is strong. In early narcosis Embley, working with over 2 per cent. vapour, repeatedly obtained complete and fatal vagal inhibition of the heart. With lower dilutions the inhibitory action was not fatal. The point I desire to emphasise is, that the dilatation of the heart and the vagal inhibition are not fatal when a lower tension of chloroform is uniformly acting upon the tissues of the body, but are unavoidably fatal when the uniform tension is high or an irregularly distributed amount of chloroform finds its way to vital points. Then, as regards vasomotor action. All observers agree that under chloroform the blood pressure falls. This fall is proportional to the actual tension of the chloroform and always makes for danger both by depriving the nerve centres and heart of their necessary blood supply, and by draining the blood generally from the arteries into the veins, more particularly into the large abdominal veins, felicitously called by Leonard Hill "the abdominal pool." One sees in abdominal sections, especially under chloroform, that as soon as the abdominal walls are opened there is some shock, which steadily increases, and is most marked in deep narcosis. This is easily explained. The vessels are no longer protected by the parietes, and the thin-walled vessels dilate and receive more blood. The reverse is seen when the abdomen is closed. The shock

lessens, the patient gradually rallies, because the hæmodynamics of the abdomen have again resumed their normal condition. Now, with a low percentage of chloroform, these dangers are lessened or even annulled. To put it in another way, if dangers arise when the chloroform in the body is uniformly distributed and is of low tension, remedial measures result in the safety of the patient; if the tension is high the patient dies. It would be worth much discomfort to the operator to ensure this maintenance of safety, but I think that my cases will show no discomfort to the surgeon need arise when a low tension of chloroform is employed.

With high-tensioned vapours, my past experience goes to show that it is extremely difficult to ensure a uniform distribution of chloroform, and it often happens that a patient, seemingly narcotised, is in fact incompletely anæsthetised, and, even if he safely emerges from the stage of induction, is in greater peril of reflex, shock, respiratory failure and death. It must never be forgotten that unlike other anæsthetics, chloroform is a protoplasm poison, and that at a certain strength it not only paralyses nerve and muscle, but absolutely kills them. This destructive power actually increases with the strength of chloroform which is carried through the tissues by the blood stream.

Now if we admit that a 2 per cent. vapour of inhaled chloroform, even taken for a prolonged period, is not destructive to nerve and other tissues, that it does not render the dilated heart unable to contract sufficiently to maintain the circulation, that it does not involve risk of fatal vagal inhibition, that it does not cause a dangerous fall of blood pressure, we have at least got to know what haven of safety we should seek. For the present we are, I submit, warranted in believing that possibly as our methods improve and our knowledge increases we may recognise that 2 per cent. is too high a concentration. I will not attempt here to suggest what 2 per cent. inhaled

chloroform represents in the residual air of the lungs or in the blood or tissues. The data at present is wanting. I propose rather to explain how, by means of Mr. Harcourt's simple apparatus, we can obtain this 2 per cent., and lessen it as the necessities of the case require. The apparatus consists of a two-necked bottle, which is filled with chloroform to near the top of the conical part, and two coloured glass beads are dropped into the liquid to



MR. VERNON HARCOURT'S INHALER—The index point is 1 per cent.

indicate when the temperature is within the range 13° to 15° C. If the temperature of the chloroform is below 13° , both the coloured beads will float; if it is above 15° both will sink; in the former case the proportion of chloroform inhaled will be less than the pointer of the stop-cock indicates; in the latter case it will be greater. During inhalation the chloroform is cooled by evaporation; its temperature may be kept between 13° and 15° by now

and then holding the bottle in the hand till the red bead has floated up and the blue bead is beginning to rise.

The stop-cock is so made that when the pointer is at the end of the arc nearest the bottle of chloroform the maximum quantity is being administered—namely, 2 per cent. When the pointer is at the opposite end only air will be inhaled; and when it is midway dilution of the 2 per cent. mixture with an equal volume of air will make the proportion 1 per cent. The shorter lines on either side indicate intermediate quantities, namely, 0.8, 0.6, 0.4, 0.2, and towards the chloroform bottle, 1.2, 1.4, 1.6, 1.8.

The valves on the two branches prevent the entrance into the apparatus of expired air, and also serve to show whether the stop-cock is working rightly. Only one valve opens when the pointer is at either end of the scale, both equally when the pointer is midway, and for all other positions one valve opens more and the other less, in the degree indicated by the position of the pointer on the scale. The movement of the valves shows also how full and regular the breathing is.

It is generally found that beginning with the pointer at 0.2, and moving it on towards the chloroform bottle at the rate of one division about every half-minute up to 1.6 or 1.8, produces narcosis as quickly as is desirable.

For the maintenance of narcosis it is believed that 1 per cent. or even less will be found sufficient. The stop-cock can be moved by a touch of the finger so as at once to increase or diminish the dose.

The face-piece, which is provided with an expiratory valve, and can be fixed in any position, is either attached directly to the inhaler, which in this case is held in the hand, and should be kept as nearly vertical and as steady as possible, or can be connected by about twenty inches of half-inch rubber tubing, the inhaler in this case being supported on a stand or hung on to the back of the bed.

The mask is made of solid toughened rubber, fitted with a rubber air-cushion. It can be washed or boiled, and

as it becomes plastic in hot water the shape can easily be modified, if required, so as better to fit the patient's face.

Now any apparatus must differ in the hands of various men, for, happily, none can even invent "a penny-in-the-slot chloroform machine." There must be the controlling mind behind the mechanism: in the first place the hand must acquire the dexterity necessary to get the full use of the contrivance, and, secondly, as the user has the power of altering the strength of vapour his knowledge must guide him in selecting the requisite strength of vapour for each patient.

It would be tedious to read lists of cases to you, so I will only mention a few, and in passing say I have now used this inhaler for some hundreds of cases, including the graver abdominal operations involved in partial resection of the stomach, pylorotomies, enterectomies, gastro-enterostomies, hysterectomies, colectomies, appendicotomies; with cholecystectomies, and other very complex operations involving the liver and intestines. I must add to my list removal of cerebral growths, Hartley-Krause's resection of the Gasserian ganglion, the dissection of the nerves in the suboccipital triangle for torticollis, and a number of other operations more severe to perform in some cases than their mere names might indicate. In most of these, although employing a 2 per cent. for induction, I have worked with a 1 per cent., or in some cases, a .5 per cent. vapour. Now I think these operations require two things from the anæsthetic; they call for a complete and absolute narcosis, and a freedom from reflex movements. These cases tax the skill of the surgeon, and induce him to look for and demand from his chloroformist that such *desiderata* are given him, and when I say that in only one case have I supplemented the Harcourt inhaler, and then only for a minute at a critical moment in a gall-bladder case, when there was some rigidity, I think I may say that I have some reason to believe that the narcosis offered was satisfactory from

the point of view of the surgeon. In none of these cases have I been caused any alarm by conditions arising from the anæsthetic.

But there are other cases in which the operation is not so much to be dreaded as the actual condition of the patient. Into this category come bad empyemas and liver abscesses, communicating with a bronchus, extensive goîtres with tachycardia, and fat, feeble people with an addiction to alcohol.

I have used the inhaler now for several goîtres and several empyemas, and with these have found the greatest comfort from being able to diminish my percentage of chloroform. You may say that a skilled man with a Skinner's mask and a drop bottle can do this. Possibly, but how many can? And if you try even your skilled men and test them by accurate methods I venture to say that their percentages will be wildly wide of the wished-for amount.

I wish, if I may, to mention a few cases.

A lady of extreme obesity, over 60, puffy, had cancer of the body of the uterus, and as abdominal section through many inches of fat was thought impossible, it was decided to perform a vaginal hysterectomy. Her condition was so unsuitable for any anæsthetic that I had to warn the friends that her life was in danger. As a matter of fact, she not only gave me no trouble, she was not sick, had no headache, and told me subsequently she had no idea that she had taken an anæsthetic.

A lady of over 40, a chronic asthmatic, with grave aortic lesions, kidney trouble, and bronchial catarrh, was another case so bad that I was seriously anxious about her. The result of the chloroformisation was absolutely perfect. There was no trouble during the narcosis or afterwards.

But an even worse case was that of a gentleman whom I was asked to see to determine whether he could take an anæsthetic. I am allowed to mention this case by the courtesy of one of the Fellows of the Society. The

patient, aged 60, about 5 feet high, and weighing over 17 stone, had rolls of fat all over him. He suffered from bronchitis and emphysema, with a feeble fatty heart with dilated aortic and mitral orifices, and albuminuria. I expressed the opinion that unless the operation were imperative with a view to saving life he ought to be spared what I regarded as a grave risk, especially as previously he had taken an anæsthetic with, I was told, extreme difficulty, and was placed in some danger. However, as the operation had to be done, I used the Harcourt inhaler, and had no difficulty in maintaining anæsthesia, after obtaining full narcosis, by a 1 per cent. vapour.

Another class of cases is that of intestinal obstruction with vomiting. With some grave cases of this sort I have used the inhaler successfully because I was able to limit my doses so accurately. In the same way patients with a cerebellar tumour, since there is commonly pressure in the region of the medullary centres, are among the most dangerous with which chloroformists have to deal. When we employ a low percentage vapour these dangers are lessened, and with Mr. Harcourt's inhaler I have satisfactorily dealt with several of these cases.

The dangers met with in using this inhaler have been in no case serious. I have never had to employ artificial respiration or tongue traction, or indeed, any heroic treatment whatever. As to after-effects, vomiting has often been absent, and I believe generally less severe than when other methods are adopted. In many instances, delayed vomiting follows chloroform in cases where morphine has been given, and it is, I believe, often the combination of these two drugs which occasions this troublesome symptom.

In conclusion, I would say that the gist of this communication is to be found in the statement that a vapour of chloroform not exceeding 2 per cent. is quite adequate for surgical anæsthesia, and its use avoids most of the grave dangers of this anæsthetic; that such a percentage

can be obtained by the proper use of Mr. Harcourt's inhaler, and this, with experience, will be found sufficient for all requirements. Like all apparatus, its technique must be mastered, and it must be used with intelligence and a knowledge of the powers and limitations of chloroform in order that the most satisfactory results may be obtained.

The PRESIDENT said that before declaring the discussion upon the extremely interesting paper, for which they were indebted to Dr. Dudley Buxton, open, he desired to welcome, in the name of the Society, the several distinguished visitors present, especially Mr. A. Vernon Harcourt, F.R.S.

Mr. MAYO ROBSON said that when he first came to London it was seldom that he would have any other anæsthetic administered but ether, but having such a very competent anæsthetist as Dr. Buxton, he felt that he might place implicit reliance upon his judgment, and Dr. Buxton had given chloroform for him with the Vernon Harcourt inhaler in a large number of serious cases, in some of which practically the whole of the danger depended on the anæsthesia. In no single instance had there been the slightest difficulty, and he could bear out every word Dr. Buxton had said with regard to the use of the apparatus, which, so far as he could see, would, by giving the operator complete control of the dose administered, completely revolutionise the administration of chloroform.

Dr. INGLIS PARSONS remarked that in the administration of chloroform there were many points that were surprising. A well-known Fellow of the Society, in the habit of giving the anæsthetic for their Honorary President, employed an enormous inhaler, containing a sponge, upon which he used to pour one or two drachms of chloroform, and then putting it over the patient's face, entirely exclude the air for a time. When asked to adopt this method himself, he (Dr. Parsons) had decidedly refused, though the Fellow referred to had never had an accident

from it. On one occasion, when he was a dresser, the house surgeon was using Junker's apparatus upon a patient whose tongue was to be removed for epithelioma; unfortunately the tube which should have been in connection with the air space was inserted in the fluid, and a considerable amount of chloroform was pumped down the man's throat. He (Dr. Parsons) took the opportunity of observing whether the respiration or the heart's action was first arrested, and by keeping his finger on the temple found that the pulse continued after the respiration had immediately stopped. That was perhaps a unique case, but there was no doubt that in it the respiratory centre was first affected.

Dr. MACNAUGHTON-JONES said that he had had the advantage of having chloroform administered for him by Dr. Buxton with the Vernon Harcourt inhaler on several occasions, mostly for abdominal sections, and once for a deep operation on the posterior triangle of the neck, and in his experience the apparatus was altogether satisfactory. The time taken to induce the requisite amount of narcosis had not been greater than with the Junker inhaler, and in no case had the full 2 per cent. vapour been required to maintain unconsciousness; moreover, the post-operative condition of the patients had been, on the whole, more satisfactory than with any other chloroform inhaler with which he was acquainted. The success of an operation depended greatly on the judgment and self-reliance of the administrator, and they were therefore much indebted to Dr. Buxton for his paper, and to the other anæsthetists for their presence at its discussion.

Dr. AARONS said that so far as he could judge, the Vernon Harcourt inhaler answered its purpose perfectly, but whatever form of apparatus was employed, the successful administration of an anæsthetic was a question of brains.

Dr. BAKEWELL said that the present form of the instru-

ment was an improvement on an older one, with which he had had some difficulty on account of the buckling of the valves. He had, however, used the improved instrument with great success in a large number of cases, and was sure that the after-effects of the chloroform were less when this inhaler was employed. It was splendid for children, and he had used it many times at Great Ormond Street, but as children disliked anything in the form of a mask over their faces he found it better to begin with a few drops of chloroform on lint. It was a great advantage that, with a little manœuvring, the apparatus could be satisfactorily adjusted for laminectomies, in spite of the difficult position in which the patient had to be placed. The importance of knowing the exact amount of chloroform being administered at every time during the anæsthesia certainly made the use of this inhaler desirable.

MR. A. VERNON HARCOURT (a visitor) explained that originally the valves were of celluloid, which gave a beautiful flat and very elastic surface, but, unfortunately, the vapour of chloroform acted upon it, and caused a deformation which no doubt was the cause of the failure mentioned by Dr. Bakewell. He afterwards had the valves made of metal, so light as to be quite easily moved; it was also an advantage that the action of the metal valves was more easily inspected than that of the more transparent celluloid. He thought that for childbirth or prolonged operations it might perhaps be well to have some sort of a stand to hold the instrument upright so that there would be no splashing of the contents; a tube twenty inches or so could be used to connect it with the mouth- and nose-piece, and the administrator would be spared fatigue in prolonged cases. On this point he would be glad to have Dr. Buxton's opinion. He had been gratified by hearing those gentlemen who had spoken of their successes in using the apparatus.

DR. DUDLEY BUXTON, in reply, said that in regard

to the case of chloroform poisoning when the Junker apparatus was employed, it was quite possible that the overwhelming amount of chloroform swallowed had produced conditions which had led to the respiration ceasing before the circulation; no doubt by vagal reflex inhibition. He was in the habit of taking from six to ten minutes to induce chloroform anæsthesia, and he might say that if an anæsthetist knew how to give chloroform by Junker's inhaler he could always get a patient under it. *A propos* of "failure" of methods, he mentioned a case in which an attempt was made to give ether by pouring it on to a towel, which was held over the patient's face; the patient naturally got excited, and the administrator said, "This gentleman cannot take ether, I will give him chloroform." The failure was, of course, the result of a faulty method. He insisted on the importance of surgeon and anæsthetist being in perfect accord with each other. He thought the stand and tubing suggested by Mr. Vernon Harcourt might be advantageously adopted in some cases, but as a matter of fact, the fatigue of holding the instrument when one was accustomed to it was not great, even in a long operation.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, APRIL 14, 1904.

PROFESSOR JOHN W. TAYLOR, M.D., F.R.C.S., PRESIDENT,
IN THE CHAIR.

SPECIMENS AND CASES.

Mr. J. FURNEAUX JORDAN read notes of the following cases, exhibiting the specimens:—

(1) HYDROMETRA.

Mrs. K., aged 63, was first seen by me on August 23 of last year, in consultation with Dr. Ware, of Kings Heath. Her history was that she had been married forty-three years, had had five children—youngest aged 28—and had always enjoyed good health until she was 50, when a large tumour developed in the abdomen. She was admitted into the Birmingham Hospital for Women by Dr. Savage, and had a large ovarian cyst removed. Five and a half years ago a second tumour formed; she was operated upon in Dr. Savage's private hospital. She was told that she had a cystic tumour of the womb and that an abscess had been opened. The tumour was not removed, but has been growing slowly ever since. For the last two or three weeks the tumour had been excessively painful and tender, and a localised swelling had formed at the seat of the old scar. This was the history I got when I saw her, and I found a thin, almost emaciated little woman lying on her back, knees fully drawn up, and abdomen enormously distended. Below the umbilicus there was a tense, red, œdematous swelling, obviously an abscess nearly about to burst. The abdominal swelling—larger

than a full-sized pregnancy—was very tense and tender, and a distinct thrill could be detected all over it. On internal examination the large cystic swelling was found to bulge down into the pelvis. The cervix of the uterus could not be felt, nor could I make out any distinction between the tumour and any uterus. Her general condition was bad—temperature over 102° , quick pulse, thick, dry fur on the tongue, and constipation.

I admitted her to the Women's Hospital on August 25, and when I saw her the next day found that the abscess in the old scar had burst, whereby she was much relieved, and through the small opening (formed by its bursting) a watery fluid containing cholesterin crystals exuded. Her general condition was improved—bowels open, pulse slower and regular, temperature normal. Urine acid, and no albumin. Through the courtesy of Dr. Smallwood Savage I was able to see his father's notes on the case. These showed that she had had a pyometra, which had been opened, and the opening into the uterus had been sutured to the abdominal wound and the cavity drained. I still could find no sign of any cervix, the vagina being stretched underneath and behind the lower part of the tumour. You, Mr. President, very kindly saw the patient with me, and we decided that it was a hydrometra, and that it should be removed.

On August 27 I operated, assisted by Dr. Smallwood Savage. Even in the lithotomy position I failed to find any trace of cervix. The bladder was small and pushed away to the right side behind the pubes. I tapped the cystic swelling through the anterior vaginal wall to ascertain the nature of its contents, which proved to be a light brown fluid with abundance of cholesterin crystals. I then opened the abdomen, and after dividing some dense adhesions of omentum and bowel to the upper part of the tumour, found the tumour firmly adherent to the old place of suture, and this necessitated the removal of that part of the abdominal wall containing the old scar. The dis-

tension of this uterine tumour was so great that the upper part of it appeared as bluish, fibrous tissue, almost like an ovarian cyst. I tapped it, and then was able to pull the bulk of it through the incision. But the whole of the lower part was embedded in dense fibrous adhesions, which it took a long time to separate. I ligatured the broad ligaments and the uterine arteries, and, just above the level of the ureters, amputated the uterus. After establishing a gauze drain from the remains of the cavity into the vagina, I sutured the edges of the cut uterus with fine silk. The part remaining was about the size of a smallish virgin uterus. The left ureter was dilated to the size of one's finger, the right one appeared normal.

She stood the operation remarkably well, and the next day, when I saw her, the temperature was 99° , pulse 100; the bowels had acted, there was no sickness, and she felt very well. This good progress was maintained until the fifth day, when she complained of feeling very weak and unable to sleep. She had had very little sleep the night before. On the sixth day she passed less urine than before, and on examining it I found albumin and a small quantity of pus. The condition of the urine did not improve in spite of treatment and washing out of the bladder; in fact, the quantity of pus increased. She gradually got weaker and weaker, and on the eleventh day became semi-comatose. She continued in this condition until the fourteenth day, and then died. Temperature only once rose to 100° , and never above it.

Post mortem.—No peritonitis. On the left side, the stump of the appendages shows a stitch abscess containing 15 minims of pus. The remnant of the uterus closely adherent to bladder, the cavity very wide, substance of walls thickened and fibrous. Kidneys unequal in size, left one two-thirds of the normal size, the right one nearly double the normal size, both greatly diseased, with adherent capsules, rough surfaces showing many cysts, some of which are suppurating, dilated calices lined with a thick

pyogenic membrane and containing urine and pus, and in the left kidney numerous small concretions. The renal tissue shows evident degeneration, but little fibrosis. Bladder, chronic cystitis. Cause of death, renal disease, result of long-continued suppuration previous to operation.

(2) DOUBLE HYDROSALPINX.

Mrs. P., aged 39, married fifteen years, two children—youngest aged 13. For ten years has suffered from attacks of pain in the abdomen, and has been told several times that she has inflammation of the bowels. Menstruation for the last two years too often and loses far too much. Acute pain causing her to lie up on the third day of the period. On examination, a distinct, freely movable tumour is to be felt in the lower left part of the abdomen. No connection with the uterus and entirely above the pelvis. Pain on pressure in the right fornix of the vagina. I thought it was an ovarian tumour with a long pedicle.

On March 10 last I operated and removed a hydrosalpinx from each side; this larger one, from the left side, was lying above the level of the uterine fundus and had no adhesions. The small right one was adherent to the back of the right broad ligament. She made an uninterrupted recovery, and went home on March 28.

The PRESIDENT said that Mr. Jordan's case of hydro-metra following pyometra (apart from its operative interest) was of some value as bearing on the analagous diseases of pyosalpinx and hydrosalpinx. Hydrosalpinx was a condition very difficult to explain, and he thought it might sometimes be accounted for by the very virulence of the gonorrhœal or other endometritis starting the disease. It was possible that this might cause early and complete occlusion of the uterine end of the tube while the disease was limited to the uterus and before the tube had been invaded by micro-organisms. If so, it was quite conceivable that the inflammation, which was purulent in the uterus, might be only represented by a sterile watery

exudation in the tube. The interesting cases brought forward by Mr. Jordan seemed rather to bear out the old idea that hydrosalpinx might be simply a later stage of pyosalpinx. It should be noticed, however, that in the hydrometra the fluid contained cholesterine; in hydrosalpinx the fluid was generally limpid. The President then alluded to the presence of several distinguished visitors, including the President of the Obstetrical Society, Dr. Prochownic, of Hamburg, and Dr. Fellner, of Franzensbad, and welcomed them in the name of the Society.

Dr. FREDERICK EDGE exhibited three specimens and read the following notes :—

(1) MYOMA OF THE RIGHT BROAD LIGAMENT SUCCESSFULLY ENUCLEATED BY ABDOMINAL SECTION.

The patient is a multipara, aged 43, well nourished and generally healthy, except that she is anæmic and careworn; last child, aged 12.

She has suffered from painful and profuse menstruation, which has become worse and worse. There was pressure on the bladder and consequent frequent micturition with tenesmus. On examination there was found, *per vaginam*, a round, cystic swelling of the anterior vaginal wall about the size of a walnut. This was diagnosed as a retention cyst. The uterus was found to be enlarged irregularly, chiefly to the right, and a sound passed four and a half inches, which was about half the distance it would have entered had the uterus been continued to full extent of the tumour. Therefore, it was considered that the myomatous mass was chiefly subperitoneal, but it was not diagnosed as intraligamentary. As the tumour was growing, the bleeding increasing, and the pressure symptoms causing great suffering, especially from the bladder, I advised operation.

On opening the abdomen, the parietal peritoneum was found to have been carried up the front wall, and this for a moment obscured matters. However, by noticing

the size of the uterine fundus it was evident at once that the myoma was intraligamentary. I shelled it out, but found that it had a very intimate union with the right anterior lower uterine wall, where its vessels entered. There was severe bleeding when I divided this, but only one or two arteries spouted, and were tied. The venous bleeding was controlled by sutures drawing together the uterine tissue. The cavity in the broad ligament shrank a good deal, and its peritoneal coat was sutured to the parietal peritoneum at the lower angle of the wound. The rest of the operation was finished as usual. The retention cyst in the vagina was emptied. The patient recovered uninterruptedly and without any reaction.

I have removed several broad ligament myomata, where no connection with the uterus was present, but it is a question whether the majority of broad ligament myomata are not originally pedunculated uterine growths.

(2) CALCULUS OF THE BLADDER FORMED ON SILK SUTURES USED IN PERFORMING HYSTERECTOMY.

This calculus was removed by vaginal lithotomy three years after panhysterectomy of a myomatous uterus.

It was encysted and not easy to sound. Dilatation of the urethra and traction with forceps failed to remove it. I therefore incised the base of the bladder *per vaginam*, and removed it with the finger. The vaginal incision was not sutured, but the bladder was drained. The wound healed within the week, and there was no leakage. I have treated several cases in this way, and consider that where there has been considerable alteration of the parts by contraction of cicatrices, it is best not to suture, especially if the bladder is septic or in a doubtful condition.

(3) A DISPLACED SPLEEN SIMULATING A BROAD LIGAMENT CYST SUCCESSFULLY REMOVED BY ABDOMINAL SECTION.

The patient, a school teacher, aged 24, and unmarried, in August suffered from peritonitis and was sent to Birmingham by Dr. Wilson, of Barnsley. To me she com-

plained of paroxysmal pain in the abdomen. She had had amenorrhœa for three months, and before that time scanty menstruation; she was costive, but had no swelling of the feet, and her general organs were normal. A rounded tumour was to be felt on the right side of her small uterus; the hymen was intact. *Per rectum* the tumour was diagnosed as a cyst of the broad ligament.

After abdominal section and the separation of adhesions I enucleated a reniform tumour from between the broad ligament and omentum. Owing to twisting of the pedicle, the mass was black with extravasated blood, and as it seemed doubtful of vitality if left, it was therefore removed. There was, however, some question as to how to treat the pedicle, as from its shape the tumour appeared to be a kidney. On cutting into it, the mass proved to be a spleen, and the pedicle was therefore ligatured and dropped.

The blood, examined after the operation, showed some deficiency in the red cells (4,000,000), a slight increase in the leucocytes, and a good many polynuclear cells. A week later the blood was normal. The patient did perfectly well, and has returned to her work.

Dr. HEYWOOD SMITH remarked that it was but rarely that the spleen became a pelvic tumour. Some years ago a case sent to him as an ovarian growth turned out on examination to be splenic. Mr. Bland Sutton operated and found it behind the uterus on the left side.

Dr. BEDFORD FENWICK, referring to the first specimen shown by Dr. Edge, said that myomata of the broad ligament were always muscular or fibroid growths, and different in structure from the tissue of the broad ligament; in such cases—and he had operated on several within the last few months—he had invariably been able to trace some connection with the uterus. In one case, quite recently, a calcareous fibroma, attached to the omentum, had a fine pedicle projecting downwards which had evidently at some time been connected with the uterus and after-

wards become detached. It was, of course, not unusual to find calcareous degeneration in a fibroid with a very slender pedicle. He thought the spleen shown most interesting; the entire removal of the spleen was sufficiently rare to make the blood condition of the patient, when some months had elapsed, an important point, and he hoped that Dr. Edge would report upon it.

Dr. MACNAUGHTON-JONES maintained that myomata of the broad ligament were sometimes quite independent of the uterus. In regard to what the President had said about hydrosalpinx being a sequence of pyosalpinx, Dr. Charles Hanley had recently published a very able paper which showed that hydrosalpinx might be quite independent of any pyogenic invasion whatever.

Dr. EDGE, in reply, said that he should not think of removing a displaced spleen if there was no torsion, but would replace and fix in with a few sutures. Many cases had been successfully treated in that way. In myomata of the broad ligament, in the majority of cases, there was, in his experience, a certain connection with the uterus which led him to think that they had their origin in that organ. They sometimes became detached, but it was a mistake to suppose that there was no tissue in the broad ligament itself of the kind from which a fibroma might arise. Every opportunity would be taken to ascertain the condition of the blood in the patient, who had gone back to Warwickshire without her spleen.

Mr. F. BOWREMAN JESSETT read notes of the following cases :—

BILATERAL DERMOID OVARIAN CYSTS WITH TREBLE TWIST,
AND STRANGULATION OF THE LEFT PEDICLE.

I am indebted to Dr. Balgarnie, who kindly called me in to see the patient with him, for the note of this case until the date of our consultation.

B. B., aged 21, had always enjoyed good health. Catamenia regular and without pain. One child born, May, 1903.

In November, 1903, she had a sudden attack of pain referred to the left hip, causing faintness and sickness; she was in bed for four days, but saw no doctor. About noon on February 24, 1904, just at the termination of an uneventful period, she again had severe pain referred to the left hip, accompanied by faintness and sickness. Dr. Balgarnie was called in to see her in the evening of the 25th. She was then in bed and complained of "sciatica." She had a rapid pulse, 120. Temperature normal. On examination of the abdomen a tumour was noticed in the lower abdomen, slightly tender. Morphia was given by the mouth, but was rejected at once. Fomentation and a second dose of morphia gave relief. On February 26 her condition was much the same—pain, very severe, was relieved by hypodermic injection of morphia. On the 27th, unknown to Dr. Balgarnie, she was led into another room; by the evening her symptoms were much more severe, with a rising pulse, temperature 101° , increased sickness, tenderness much more marked over tumour, which until now had been more or less defined. Its outline was obscured by obvious peritonitis; subsequently the symptoms gradually abated. On February 29 I saw the patient with Dr. Balgarnie. She had a rather anxious expression, and some tenderness over the lower abdomen. The abdominal muscles were tense and it was with difficulty that anything like a defined tumour could be felt. *Per vaginam* there was distinct fulness in the left fornix, tender on pressure, and somewhat tense. Bimanually this fulness was distinctly connected with that of the lower part of abdomen. On the right side the right ovary was prolapsed, distinctly cystic, and about the size of a Tangerine orange. The uterus was somewhat fixed and tender. The diagnosis was rather obscure, but I arrived at the conclusion that we had to deal with a ruptured tubal gestation, or an ovarian tumour with a twisted pedicle.

I advised early operation; as, however, the symptoms had abated and the patient was in every way better than

she had been, and it was necessary to remove her to the Cottage Hospital, because no convenience existed at her own home, we decided to wait and continue the treatment she had been having.

On March 7 she was removed to the Cottage Hospital, and on the 12th I operated, with the assistance of Dr. Baggie, Dr. Adams administering the anæsthetic.

On opening the abdomen in the middle line by an incision about three inches in length, between the pubes and umbilicus, I found the omentum adherent to the parietes by recent adhesions; on carefully separating these the omentum was found to be adherent to the tumour. This was carefully detached. On endeavouring to pass my hand around the tumour I found it wedged into the pelvis and very adherent to the parietal walls in front and the intestines above and behind. These adhesions were separated by sweeping the hand carefully round the tumour, which extended quite down into the pouch of Douglas. I next extended my parietal incision upwards as high as the umbilicus, and by passing my hand into the pouch of Douglas, lifted the tumour bodily out, not, however, without the rupture of a small cyst on its posterior surface. The pedicle was then seen to have three distinct twists and was quite black, and very shortly would have become gangrenous. I transfixed the pedicle and tied it in the usual manner.

I next examined the uterus, which was normal, and drew up the right ovary, which was, as I had discovered, cystic and enlarged. I removed this. The patient, with the exception of a stitch abscess, made an uneventful recovery.

On cutting into the larger tumour it was found to be a dermoid, and on bisecting the smaller right cystic ovary a distinct dermoid cyst is seen in the centre.

I have ventured to bring the case forward as ovarian dermoids are sufficiently rare to make them of interest. Thus Olshausen has collected a series of 2,275 ovariectomies

performed by various operators, and among them there are only eighty cases of dermoid cysts (3·5 per cent.), and to find both ovaries so affected is still more rare. The case is also remarkable on account of the treble twist of pedicle. In my experience the pedicles of dermoid or solid tumours are much more liable to become twisted than those of ordinary cysts of the ovary. The diagnosis was also somewhat uncertain, as although the sudden pain experienced pointed to ovarian tumour with a twisted pedicle, yet the fact that *per vaginam* a distinct fulness was felt in the left fornix rather suggested the possibility of a tubal pregnancy.

CASE OF LARGE FIBROID SPRINGING FROM THE ANTERIOR SURFACE OF THE CERVIX UTERI, PUSHING UP THE BLADDER AND PERITONEUM TO WITHIN AN INCH OF THE UMBILICUS.

Mrs. D., aged 48, married, no family, was sent to me by Dr. Case, of Fareham, suffering from an abdominal tumour. About five years ago she first noticed pain in the lower abdomen, for which she consulted Dr. Case; there was then no tumour to be felt. A year later she suffered from menorrhagia, with pain in the back and right side, which continued with greater or less severity until about a year ago, when, notwithstanding treatment, it increased considerably, and the tumour, which had been noticed for some time, began to enlarge. When she consulted me on March 3, I found a tumour in the lower abdomen, extending as high as the umbilicus and very slightly mobile. Bimanually, I found it extended to within two inches of the outlet of the vagina, and the os uteri could not be clearly defined, but was pushed backwards by the growth. The whole tumour seemed to be somewhat fixed.

The patient suffered from rather frequent desire to micturate, menorrhagia and pain. She was blanched, and moved about with decided discomfort. I advised operation, and on March 13, with the assistance of Mr. Hugh

Case, I operated, Dr. Hanson giving the anæsthetic, Dr. George Case being present.

On making the usual incision in the middle line between the pubes and umbilicus and dividing the parietes, I failed to find the peritoneum, but came down upon what was apparently the bladder, and had to extend my incision upwards to the umbilicus before I could get into the peritoneal cavity. On passing my hand downwards into Douglas's pouch behind the tumour, and endeavouring to lift it out, I found it was firmly bound down. I then separated the bladder from the tumour and introduced Doyen's myoma screw, and by firm traction upon the tumour and digging around it with my disengaged hand, I succeeded with difficulty in drawing it out of the pelvis. Having ligatured the arteries on that side, I enucleated the tumour from the fibres of the uterus. The body of the uterus, of normal size, was then seen to be in the abdominal cavity covered by its peritoneum. As there was very considerable oozing from the surface of the uterus from where I had peeled the tumour I thought it advisable to remove it. There was a considerable cavity left from where the tumour had been extracted; this I laced over by several strands of catgut in the manner described by Dr. W. Duncan at our last meeting. By this means the cavity was closed and much of the oozing stayed. I, however, introduced a gauze drainage into the lower angle of the wound, and having carefully closed the divided peritoneum in the abdominal cavity I closed the parietal wound by means of three layers of ten-day gut sutures. The patient made a good, although rather slow, convalescence.

Remarks.—This tumour evidently sprang from the anterior surface of the cervix uteri and extended laterally to the right, splitting up the right broad ligament. It thus extended forward and upwards, carrying the bladder and the peritoneum before it. The notable points about the operation were, first, the bladder, being directly under

the parietal wound and stretched over the tumour, was in great danger of being wounded; and, secondly, the difficulty of extracting the tumour was very great, and had I not had the myoma screw would have been very much more so.

In reply to a question from Dr. Edge, Mr. JESSETT said that the bladder had not been injured in any way.

A SUGGESTION FOR THE TREATMENT OF PUERPERAL CONVULSIONS BY SPINAL SUBARACHNOID PUNCTURE, WITH NOTES OF A CASE SO TREATED. By T. ARTHUR HELME, M.D., M.R.C.P.(Lond.), F.R.S.E., Hon. Surgeon for Women to the Northern Hospital for Women and Children, Manchester.

Our knowledge of the etiology and pathology of eclampsia of pregnancy and the puerperium is so unsatisfactory as to afford no rational basis for treatment. In the present state of affairs we must turn to clinical study and to the results of personal experience for guidance. No apology is needed, I think, for venturing to suggest any means of treatment which offers the possibility of relief in this distressing condition.

Whether of mechanical or chemical origin, it is now agreed that the phenomena of eclampsia are largely dependent upon the presence of toxic material in the blood, discussion still going on as to whether this accumulation is the result of deficient elimination, imperfect metabolism, or increased production, or of the introduction of some new toxin foreign to the non-pregnant state. The nature of the toxin is still unknown, nor is there more certainty as to the way in which it produces the eclamptic state.

In the matter of treatment it is agreed that there are three chief indications: (1) To prevent the accumulation and assist the elimination or destruction of the poison; (2) to deal with the pregnancy; (3) to control the convulsions; and upon each of these there exists a diversity of opinion as bewildering as in the question of causation.

The first is scientifically the important one, but at present our methods are purely empirical. It is to the last of these three principles that I wish especially to draw attention, but I may say that my experience coincides with what I believe to be the experience of others, viz., those cases have in my hands done best where the pregnancy has come to an end, and the convulsions have been controlled; the worst cases have been those in which the convulsions could not be controlled and where coma supervened; and I have come to regard the *extent* to which the nervous system is involved and the success with which this can be controlled as the key to prognosis.

The questions of the management of the pregnancy and of the toxæmia must be dealt with equally whether we see the case before the occurrence of convulsions or afterwards.

(1) In the pre-eclamptic stage (*i.e.*, the stage in which the albumen in the urine may be increasing while the urea is diminishing in amount, and certain signs and symptoms are appearing, as *e.g.*, headache, œdema, respiratory distress), the first indication is to combat the accumulation of the toxin by dietetic and hygienic measures, attention to the excretions, and possibly the administration of extract of thyroid gland, based on the theory that, owing to thyroid deficiency, tissue metabolism is imperfect.

In many cases treatment on these lines succeeds and pregnancy may run to term; but the anxious cases are those in which the deficiency of urea excretion and albuminuria persist and untoward symptoms intensify. In these cases we have to face the important question of interfering with the pregnancy. If, on the one hand, it is the fact that there is deficient excretion or increased production of effete material directly dependent upon the pregnant state (*i.e.*, upon the fact that the maternal organism cannot meet the strain put upon her metabolic processes by the life and growth of the fœtus and their consequences), and by appropriate means we are unable to restore the

balance, we must consider termination of the pregnancy as an important and integral part of treatment; or, if the toxin is some special toxin generated in the gravid womb from placental or fœtal faultiness, or some toxin formed in association with the dissolution of deported placental cells, the same rule holds, though possibly we must eventually rather look to serumtherapy or treatment by antitoxin injections. If, on the other hand, it could be shown that the fault lies in some distant organ of the thyroid gland, and a remedy can be found by supplying some deficient element of its secretion, a great point would be gained, for interference with pregnancy would become unnecessary.

If it should become necessary to terminate the pregnancy, the *choice of method* is of importance. Formerly I have induced labour by the introduction of bougies and also by the glycerine method of Pelzer; but recently I have employed the more rapid method of dilating by Bossi's dilator.

The first and second principles of treatment are bound up together and are of special importance in the preventive treatment of eclampsia, but, once convulsions have set in, the third principle becomes of instant and of first importance.

(2) Eclamptic stage. The first principle of treatment remains in force; it is necessary to get rid of the toxin, and now more active measures must be taken—hot packs, saline injections and rectal irrigation are of use.

With regard to the second principle—the management of the pregnancy—there is great diversity of opinion. Looking upon the continuance of pregnancy as a vital factor in the production of the poison and the causation of the disease, my own practice is to end the pregnancy whether labour has commenced or not. Truly, the onset and progress of labour by the unaided natural powers, involving much unwonted muscular work and nervous strain, must throw into the system an additional amount of effete material, with which the excretory organs, if

already damaged, may be unable efficiently to cope, or the violent uterine contractions may conceivably give rise to further escape of placental cells into the maternal bloodstream, and so intensify the danger; and it is on this account that I personally am of opinion that the right course is not to leave the matter in the hands of the maternal powers, but to terminate the labour as expeditiously and as safely as possible by artificial means.

Though much has been said (and possibly rightly said) in favour of abdominal or vaginal Cæsarean section, my own practice is as follows:—

(1) Where labour has commenced and the os is dilating I chloroform and deliver, if necessary completing dilatation artificially by hand or instrument.

(2) Where labour has commenced and the os is not dilating, or when labour has not commenced, I chloroform and dilate by means of Bossi's dilator, and deliver; formerly I dilated manually or by hydrostatic bags, but now I prefer Bossi's instrument which, I believe, if carefully used, may be safely used. Possibly the fact that my muscular development is not too great has preserved me from inflicting those serious injuries which apparently have been met with in its use. If dilatation be performed slowly and the cervix carefully watched, there should be little danger.

But, as I said before, when once convulsions have occurred, whether before, during, or after labour, the third principle becomes of instant importance. It is now essential to control the convulsions, and this is the special point to which I desire to call attention.

The Convulsions.—How are the convulsions caused? Several suggestions have been offered:—

(1) That they are produced by direct action of the toxin upon the nerve cells.

(2) By cerebral anæmia, the result of constriction of arterioles.

(3) By cerebral œdema, the result of increased arterial tension.

(4) By coagulation and capillary thrombosis.

A suggestion which I now advance is that the eclampsia is due to increased cerebrospinal tension.

If we look at the clinical aspect of a case we see at once that this suggests intracranial pressure. The premonitory signs of headache, dizziness, irritability and sudden blindness, the clonic, tonic and tetanic spasm, the stupor and coma, all are consistent with the existence of increased intracranial pressure. Whether this be the cause or not, the continuance of the violent convulsions will increase the pressure by causing congestion of the cerebral vessels and, if continued, serous effusion and even hæmorrhages may occur.

We have only to think of the picture of the eclamptic woman to see how grave must be the congestion resulting from each attack. If this intracranial pressure be present and if it be allowed to continue unrelieved or to increase, it will in all probability lead to death. If the convulsions continue unrelieved, small or large hæmorrhages or other vascular disturbances may occur, and, once this state is reached, the patient will almost inevitably die—these are the cases that end in death, whatever treatment be adopted, and my experience has led me to the conclusion that the tendency to death is proportionate to the extent to which the nervous system is involved.

Whilst, therefore, dealing with the questions of the toxæmia and the frequency, it is essential to control the fits.

What means have we? Up to the present time we have been dependent chiefly upon drugs. It has lately been suggested that saline injections may be of use by washing out minute capillary thrombi—an unsatisfactory theory. Venesection, too, has been thought to influence the fits by reducing arterial tension; but it is chiefly upon drugs that we depend. I must confess to employing drugs, especially morphia, with a feeling of anxious doubt. We have yet no rational basis for their use: we are acting altogether in the dark and are introducing into the body,

once and for all, substances, which, whilst they may do good, offer for all we know an equal chance of doing harm.

Most of these drugs are cardiac depressants, and their actions require to be carefully watched. Morphia, if given in sufficiently large amount, whilst certainly paralysing the nerve centres, with equal certainty interferes with and checks metabolism and arrests the excretions; the interference with the latter being the antithesis of what we want. To illustrate the difficulty of the present position it is only necessary to refer to the fact that whilst one school recommends morphia to control the fits and inhibit metabolism, another would exhibit thyroid extract because it enhances tissue change.

If it could be shown, on the one hand, that the toxæmia *is not due* to the accumulation of effete materials usually present in the body, which are now in excess and capable of being eliminated by the natural channels if these could be got to work, and, on the other hand, that the toxæmia *is due* to the presence of some new toxin entirely peculiar to the pregnant state, *e.g.*, a toxin formed during the process of dissolution of placental cells (syncytiolysin or syncytiotoxin), and that this toxin chiefly acts as a poison to the nervous centres, then, until the discovery of a specific antitoxin, there might be ground to encourage us to push the administration of morphia, even though it blocked the excretions.

Recent experimental researches have been conducted in this direction. It has been shown by Schmorl and others that during pregnancy fragments of villi or syncytial cells escape into the maternal blood stream, and upon this fact has been built the following theory: these foreign cells act as a poison to the maternal system; they give off a toxin (cytotoxin), for the neutralisation of which an antitoxin (cytolysin), which has the power of destroying these cells, is produced by the maternal tissues. Veit suggested that if this antitoxin, which he named syncytio-

lysin, is formed in insufficient quantity, the placental cells are not destroyed and act as the direct cause of the eclampsia. Ascoli, as the result of experiments, concluded that the convulsions were due to the over-production of this syncytiolysin, whilst Weichardt propounds the theory that in the dissolution of the placental cells by the maternal antitoxin (syncytiolysin), a new toxin is set free, which, if not neutralised, will give rise to eclampsia, and this he calls syncytiotoxin. His conclusions are the result of experiments upon rabbits and guinea-pigs, in which he has induced all the phenomena of eclampsia. Recently these experiments have been repeated by Wormser, of Bâle, who has failed to confirm the results obtained by Weichardt.

Unfortunately, then, this interesting and promising theory remains a theory; we have no substantial evidence of the existence of this specific toxin, and our hopes of a specific antitoxin are unrealised.

We must return, therefore, to our present means of controlling the convulsions for which, as I have said, we are chiefly dependent upon drugs. It would be of inestimable value if we had some means whereby we could control the fits without introducing into the system new substances or drugs, which may do harm; some means to control the fits with certainty, averting, as it were, the immediate menace of death and allowing time to bring the pregnancy to an end and to get the excretory powers to work.

If my view, that the convulsions and stupor are dependent upon an increased intracranial pressure, be correct, we have a most satisfactory and certain means of obtaining immediate relief.

In 1872, Quincke noted the free communication of the subarachnoid spaces of the brain and spinal cord, and again in 1891 he called attention to this fact and to the possibility of tapping the spinal cord in the lumbar region. Since that time many cases have been recorded, chiefly of meningitis in children, but also some cases of persistent

headache and coma in lead poisoning and chronic Bright's disease, in which the method has been employed and relief has been obtained.

It was in November of last year that I decided to apply this method of treatment to puerperal eclampsia. The first two cases seen by me after coming to this decision I now record for the sake of contrast ; in one the method was not employed, in the other it was. Both were cases of *puerperal* eclampsia, the convulsions following confinement ; the question of treatment was simplified, for the first principle (the management of pregnancy) was not involved, the pregnancy having already come to an end before the fits appeared. Treatment then lay in the direction of controlling the convulsions and eliminating the poison ; it was a matter of energetic action.

The first case was that of a primipara, over 30 years of age, the wife of a member of the medical profession. During pregnancy, her health was good, and a fortnight before confinement, noticing that her ankles were a little swollen, she called her husband's attention to the fact : he thought little of it, but examined the urine, which contained no albumin. Labour was quite straightforward, but, as the perineum was somewhat resistant, chloroform was administered and low forceps applied. Everything appeared satisfactory, the only noticeable feature, to which no great importance was at the time attached, being that the patient was somewhat excited and lively. Delivery took place about 10.30 p.m., and during the night the doctor was summoned because of some slight attack, the nature of which was not quite evident. This recurred two or three times ; no urine was obtained. In the morning the patient had a more definite eclamptic attack, and I was sent for. On my arrival I witnessed a most violent and prolonged eclamptic seizure. By catheter I obtained a very small amount of urine (a few drachms) which was deeply mixed with blood. Chloroform was administered and a pint of saline solu-

tion injected beneath each breast, chloral and croton oil were given by mouth, and hot saline solution injected into the bowel. The question of lumbar puncture was mentioned but, owing to its experimental nature and the surroundings of the case, was not employed. In spite of the treatment adopted I regret to report that death occurred about twelve hours after the first violent attack.

The second case was one which I saw in consultation with Dr. Henry and Dr. McMaster, of Rochdale, on December 19, 1903, and to the latter I am indebted for the notes of the case. The patient was aged 29. Morning sickness had persisted all through pregnancy, and from the sixth month onward the patient had suffered from headache and swelling of the ankles, the urine being scanty. Labour was natural, lasting only a few hours, and, a midwife being in charge, the child was born at 6 a.m. and the patient was then quite comfortable; but two hours later she complained of headache, vomited, had a fit, and suddenly lost her sight, the blindness being complete. During the day the fits recurred with increasing severity and frequency. At first during the intervals the patient was irritable, but the irritability gradually gave way to stupor; the stupor deepened, until towards 5 p.m., when I first saw her, the patient was almost comatose between the fits. In ten hours there were fifteen fits; and as the day advanced the patient was progressively becoming worse.

Treatment. — During the day chloral hydrate and a diaphoretic mixture were given by Dr. Henry and Dr. McMaster; at 3 p.m. Dr. Henry telephoned to me and on my suggestion the chloral was repeated, 5 grains of thyroid extract and two minims of croton oil were administered, and normal saline solution was injected into the rectum. At 5 p.m. I met Dr. Henry and Dr. McMaster in consultation. The patient was very ill; her condition had steadily got worse in spite of the treatment employed. the fits were very violent and prolonged, and in the interval

the patient maintained a semi-comatose state ; it looked as if she must die. We decided upon energetic action, the patient was put under chloroform by Dr. McMaster, and a pint of warm saline solution (made up from Burroughs and Wellcome's tabloids, a most convenient preparation) was transfused beneath each breast ; whilst Dr. Henry attended to this, I performed spinal subarachnoid puncture in the lumbar region, and withdrew a drachm and a half of cerebrospinal fluid. The fluid escaped rapidly, as if under considerable pressure, and not drop by drop as occurs, for example, in health when the needle is inserted for cocaine anæsthesia. A rectal injection of hot normal saline solution was also given.

We stayed with the patient till 7.30 p.m., and as no farther convulsion occurred and as the patient was perfectly quiet, she was left in charge of the midwife. At 10 p.m. we again visited the patient, and was informed by the midwife that the patient had had "two very slight fits" during our absence ; the patient was, however, in a very satisfactory state ; she spoke to us, recognised the voices of the doctor and her friends, and sat up in bed to drink some water and take the medicine given to her ; there was, however, still total blindness.

From this time onwards there were no more fits, the patient steadily improved, and is now quite well and has completely recovered her sight ; the albumin disappeared from the urine six weeks after labour. For four days the extract of thyroid (5 grains three times a day) was continued, large doses of acetate of potash were given at frequent intervals, with plenty of barley-water to drink, and the bowels regulated by sulphate of magnesia for a week. Thereafter she was given a mixture of liq. ferri perchloridi, acetate of potash and aq. chloroformi. The method of operating employed was as follows : The patient was placed upon her left side and the trunk flexed as far as possible ; the skin of the lumbar spinal region was washed with ethereal soap and water, and then with per-

chloride of mercury solution (1 in 2,000). The highest points of the iliac crests being determined, an imaginary transverse line was drawn between these points; the left index finger was placed upon the point where this imaginary line crossed the spine, this point coinciding with the tip of the spinous process of one of the lumbar vertebræ. A hollow needle, $3\frac{1}{2}$ inches long, held in the right hand, was made to pierce the skin half an inch to the right of the point held by the operator's left index finger, and was then pushed onwards, being directed slightly upwards and towards the middle line, so as to pass beneath the lower edge of the vertebral lamina, and so enter the sub-arachnoid space.

Such is the history of these two cases, and the successful issue of the second case, which seemed quite hopeless, gives me a feeling of the deepest regret that lumbar puncture was not performed in the first.

I have only one case to record, and on that account I have hesitated to bring this matter forward. The importance of the subject, the peculiarly distressing nature of the occurrence, the absence of definite knowledge, and the feeling of uncertainty and semi-helplessness in our present treatment, together with the hope that this suggested method may receive extended trial and prove of value, must be my excuse, if apology be required, for bringing the matter forward at this stage.

DISCUSSION.

The PRESIDENT described the paper as a very valuable communication on a most important subject.

Dr. MACNAUGHTON-JONES said that it would be premature to express any opinion on a mode of treatment the action of which had been ascertained in one case only. If further experience substantiated Dr. Helme's view, puncture of the spinal canal would be recognised as a most valuable method of dealing with one of the most terrible contingencies which medical men had to face. Personally,

he thought that in pilocarpine they had a means of relieving eclampsia, the value of which was not sufficiently recognised, and he instanced two cases of its successful use. The first was one occurring at mid-term ; the patient was brought to him one day complaining of loss of sight, and as there was incipient choking of the disc and the urine was loaded with albumin, he advised the induction of labour. This course was adopted, and, labour coming on at night in his absence, delivery was effected by Dr. Bland Sutton, but eclamptic convulsions ensued and continued the whole of that night and part of the next day, when he administered a hypodermic injection of pilocarpine, which induced profuse diaphoresis ; the convulsions immediately ceased, and the woman made a perfect recovery. The second case was a woman who, during pregnancy, had suffered from much gastric disturbance and hyperemesis, and, after delivery, from post-partum hæmorrhage. A quantity of clots were removed from her distended uterus, and she seemed to be doing perfectly well, but after a time was attacked with rapidly succeeding convulsions ; on the injection of 10 minims of a 2 per cent. solution of pilocarpine the convulsions ceased for some hours, and an injection of 5 minims more was followed by total cessation of the fits and perfect recovery.

Mr. J. FURNEAUX JORDAN asked what the total amount of the cerebro-spinal fluid was supposed to be. It was an important point what quantity of the fluid should be withdrawn, and he hardly thought that the removal of merely a drachm and a half would relieve the intracranial pressure as much as venesection to, say, 15 ounces.

Dr. BEDFORD FENWICK agreed that, as Dr. Helme had clearly explained, the real cause of the fits in puerperal eclampsia was intracranial pressure, and that the treatment should be directed to the vascular system. ⁴ He (Dr. Fenwick) thought that it was an error to suppose that it was entirely the nervous system which was at fault, and that more attention to the condition of the heart and

to the vascular condition of the brain and nervous system generally would lead to a clearer perception of the proper lines of treatment of the eclamptic condition, and to an increase in the recoveries from that condition. Some years ago, on the supposition that the convulsions were due to intracranial pressure, he treated a succession of cases by bleeding to from 15 to 25 ounces, without drugs or injections of any kind, and they all recovered. Even without bleeding to such an extent, he thought that better results than hitherto might be obtained by tapping the pelvic circulation by means of sulphate of soda, and reducing the heart pressure by the use of nitrate of amyl.

Dr. R. H. HODGSON remarked that the convulsions of epilepsy, in which it was not asserted that there was any increase of the cerebrospinal fluid, were very like those of puerperal eclampsia. From personal experience he could confirm all that Dr. Macnaughton-Jones had said as to the beneficial effects of pilocarpine.

Dr. EDGE asked what position the patient was put into for the spinal puncture.

Dr. HELME, in reply, said that his paper was in no way intended as a criticism of the action of any drugs individually, but simply to suggest the employment of a method independent of drugs. Pilocarpine was a remedy of great value, but one that required careful watching, because of its depressing influence upon the heart, and though in some cases of eclampsia there was a robust, bounding pulse, in others the pulse was weak, and in the latter he would prefer not to give pilocarpine. He was not aware that the amount of cerebrospinal fluid in the human body had been ascertained, but just as the removal of a few drops from an india-rubber ball full of water would materially diminish the tension of its wall so, he had no doubt, the abstraction of a drachm and a half of fluid from the cerebrospinal canal would profoundly influence the tension in the cerebrospinal system. There was an element of danger in withdrawing too much ;

though he knew of one case in which an intense headache, associated with chronic Bright's disease and lead poisoning, had been relieved after puncture and allowing the drainage to go on till it stopped, so that perhaps the whole of the fluid might, in some cases, be removed without a fatal result; in other instances of coma, the abstraction of six drachms had been followed by relief. For the operation, which was quite easily performed, the patient was placed under chloroform on her left side, so bent as to arch her back; the needle was inserted at a point about half an inch to the right of the line of the spinal processes at the level of an imaginary line joining the highest points of the iliac crests, and with a simple upward movement was passed between the laminæ of the two vertebræ.

ON THE APPLICATION OF PESSARIES AND THEIR DANGERS.

By H. MACNAUGHTON-JONES, M.D., M.A.O., F.R.C.S.I.
and Edin.

It might appear that nothing further remains to be said on the subject of pessaries. Their use and abuse have been so frequently discussed, and so much has been written with regard to them, that it might be concluded that the question had been exhausted. I hope to-night to prove that this is not so, and that the time has arrived when more definite ideas should prevail as to the objects to be attained by, and the dangers which may follow, this method of treatment. Such accuracy of idea comes to be more necessary when we reflect on the fact that in general practice treatment by pessary is probably more resorted to than is any other therapeutical step in the conduct of a gynæcological case. It is true that the more barbarous contrivances of the past have disappeared, though, indeed, some still figure in the catalogues of instrument-makers. Also, with the advance of surgical measures for the relief of uterine displacements, and the better understanding of

their causation, as well as the various anatomical points of departure from the normal relations of the pelvic viscera involved in their stages, pessaries are not now so indiscriminately used, nor does every other woman who happens to have a backache move about with an internal prop. Time was, and not so long since, when for every pain in the back, every sense of weight or bearing down, every vesical trouble attributable to the uterus, any descent of the latter, a commencing rectocele or vesicocele, a pessary was at once adjusted as at least affording a temporary means of relief. It was not considered how far such a temporising with the commencement of affections which, should they increase in magnitude or extent, must entail in their ulterior consequences far greater suffering on the woman, and involve her in operative procedures of much greater severity than those which might have rectified her trouble had they been adopted in its early stages, would go. Prolapse of the vagina, before involving either rectum, bladder, or uterus; relaxation of the vaginal outlet or defect in the perineum, before it brings about descent and retrodisplacement of the uterus; hyperplasia and subinvolution of the uterus, before procidentia and ultimate retroversion and prolapse; interstitial myomata leading to displacement and hæmorrhage, are some examples of the effects of such procrastination and expectant treatment.

To clear the ground of misapprehension, let me distinctly say that no one appreciates the utility and therapeutical value of pessaries more than I do, and if I do not adhere to everything I have elsewhere said and written with regard to their use, I still believe "that in all forms of displacement, where its employment is *clearly indicated*, a pessary generally gives material relief. I know few steps in gynæcological therapeutics attended with such obvious and immediate benefit and comfort to a patient as the restoration of a retroverted uterus to its normal position, and its support and retention by a well-fitting pessary." Or, again, "that by replacement of the uterus, the use

of a pessary, and the adoption of the postural plan and periodical reposition in the knee-elbow position, in cases of retroversion, the uterus and its supports can be restored to a healthy state, so that in time the necessity is obviated for any mechanical appliance."

Also, "a very large proportion of cases of retroversion can be treated and cured by the aid of a pessary; that a smaller number, *assuming that the patient may have time and opportunity to avail of the treatment*, can be cured not only of the displacement, but of its complications, in the same manner."

"Every mobile and reducible uterus should be treated in the first instance by a support, which should be worn for a space of time proportionate to the tendency there is on the part of the uterus to revert to the backward position. Associated adnexal conditions are frequently amenable to treatment in such cases, and it should follow the reposition of the uterus."

To prove that some of the most distinguished pioneers in gynæcology recognised not only the futility, but also the danger, of the misuse of pessaries, it is sufficient to mention the names of Marion Sims, Matthews Duncan, and Gaillard Thomas. Marion Sims recognised in their use a necessary evil. "We should," he says, "always do without them if possible, but if it be impossible, then it is the part of wisdom to resort to such appliances as will best answer the indications of the individual case." . . . "The man who is not a mechanic should not trust himself to use a pessary."

"Think twice," says Matthews Duncan, "before beginning the often baneful practice of using any instrument, teaching a woman to depend on what, if not positively useful, is positively injurious, though perhaps not much. Many a woman has suffered from, and many a woman has died of, a pessary; but most pessaries, as I find them, are nearly innocuous for evil or for good. . . . When every-day experience teaches that every kind of pessary

in cases of anteversion or retroflexion frequently fails to give relief, and often only creates distress, we shall hesitate before we place in the vagina for this variety of uterine displacement a pessary of any kind."

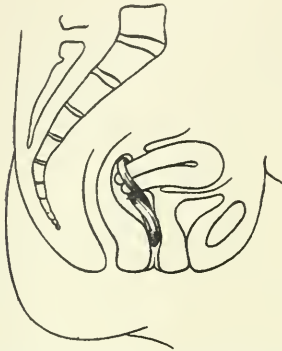


FIG. 1.—Schultze's figure-of-eight pessary in position. (Schultze.)

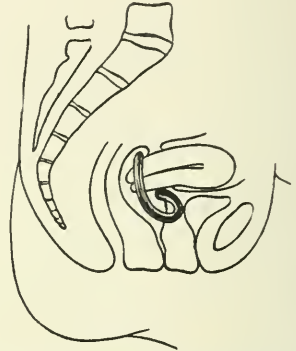
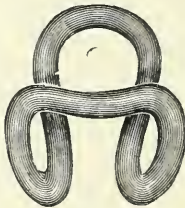
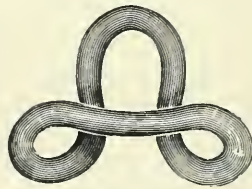


FIG. 2.—Schultze's sledge-shaped pessary in position. (Schultze.)



A.



B.

Two of Schultze's sledge shapes. A and B, moulded from ring.

Writing as far back as 1876, Gaillard Thomas, referring to the general use of pessaries, says: "Were I asked at the present moment whether I believed that in the aggregate they accomplished more good or evil, I should be forced to give a doubtful reply." He goes on to attribute the injurious consequences not so much to the instruments themselves as to their mode of application.

"I myself believe," says Schultze, "that anyone who

is able to replace a retroflected uterus in its normal position by the bimanual method can manage to make out of a rubber-covered ring of wire a figure-of-eight or sledge-shaped pessary of a suitable shape, and can afterwards introduce it properly. Anyone who is unable to replace the uterus in its normal position requires no pessary to retain it there, but may go on sticking some indiarubber ring, or one of Hodge's pessaries, under the somewhat elevated but still retroflected uterus.

"There is still a very widespread misconception that a uterus can be brought out of an anomalous position into the normal one by the pessary. No pessary in existence can do this. The normal position must first be restored bimanually; a pessary *may* afterwards maintain it." Referring to the introduction of a Hodge or ring, he says that for those who can content themselves with giving a little relief, these will always remain in use, though all they can possibly do is to diminish the painful mobility of the uterus. "The troubles and inflammatory complications arising from an unreposed retroflected uterus are, however, very often made decidedly worse by the introduction of a pessary underneath it."

The questions I should like discussed are these: (1) What is the action, and what the purpose of a properly designed and adjusted pessary? (2) What are the pathological conditions which make the use of a pessary dangerous? (3) What are the best forms of pessary for use under the different circumstances in which their application is indicated?

I cannot improve on the description given by Goodell of the principle of the ordinary Smith-Hodge or lever pessary, whatever the material be of which it is made: and this description refers, of course, also to the same class of pessary which has a cushion posteriorly. To a certain extent it also applies to Fowler's cradle pessary and to Schultze's figure-of-eight support.

"As its name indicates, this pessary acts on the prin-

inciple of a lever ; but the mechanism of its action is twofold. By stretching the vagina upward and backward, it draws the cervix in the same direction. The womb then turns on its central point of ligamentous attachment as on a fixed pivot, and the fundus is consequently tilted forwards. The womb itself thus becomes a lever, of which its point of attachment to the bladder is the fulcrum. The power is applied to the cervix and the fundus becomes the weight or resistance. This action remedies retroversions, but *not retroflexions unless complicated with retroversion, as they*

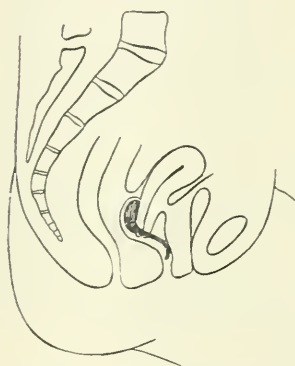


FIG. 3.—Position of curved celluloid cushion (Smith - Hodge), keeping uterus in fairly normal position. (H. M.-J.)

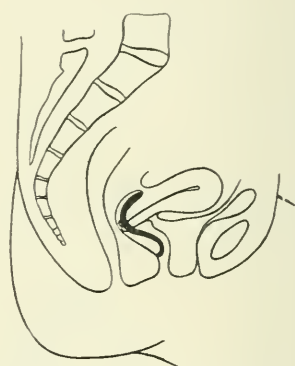


FIG. 4.—Uterus restored to the normal position—the S. pessary of author applied. (H. M.-J.)

usually are. The anterior vaginal wall, with the visceral pressure above it, now becomes the power applied to the lower limb or 'long arm' of the lever ; the posterior vaginal wall is the fulcrum, or support ; and the upper limb or short arm lying behind the cervix directly pushes the weight or fundus uteri. This action tends to remedy both retroflexion and retroversion. For instance, during the act of inspiration the descending diaphragm crowds down the abdominal viscera upon the bladder to which are attached the cervix uteri and the anterior wall of the

vagina. These organs therefore descend. As a result, the lower or fore end of the lever is necessarily pushed down by the descending anterior wall of the vagina on which it rests, while its upper or hind end proportionately rises up and tilts forward the retroverted or the retroflexed fundus. In expiration, the reverse takes place. The pressure is, therefore, not a steady but a gentle rocking one, which is the most efficient of all. This, also, is one least liable to inflict injury on the soft parts, because the points of pressure are varying ones. But to attain these ends the pessary must be mobile, *and never so long as to put the vagina on the stretch, otherwise it loses its distinctive character of a lever, and degenerates into an ordinary ring pessary. It should further impinge on the soft parts only,*

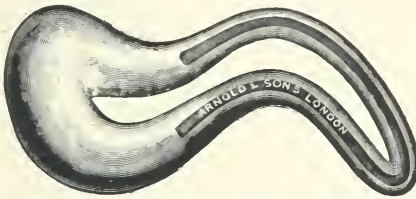


FIG. 5.—Celluloid cushion pessary. (Author's.)

and take no bearings on the solid structure of the pelvis. . . .”

A certain degree of stretching is, however, inevitable in the drawing back of the vaginal portion.

Schultze is naturally somewhat prejudiced in favour of his figure-of-eight and his sledge-shaped pessaries. We may therefore in some degree qualify what he says, but it is in the main true.

“Both by Hodge himself,” he remarks, “and by Braun, who first introduced it to us, the instrument was extolled distinctly upon the ground that it rendered reposition by the sound, the method at the time practised, unnecessary. . . . The question remains whether this pessary can keep the uterus in its normal position after reposition, an effect attributed to it by many gynecologists.

“As a matter of fact, if the uterus has been previously replaced, Hodge’s pessary does in some cases keep it in its normal position, and does so because, by extending the posterior vaginal vault backwards and upwards, it compels the vaginal portion to keep in its proper position, well at the back of the pelvis.

“But the posterior vaginal vault, if tender, as it very often is directly after the elevation of a retroflexion, cannot be put sufficiently upon the stretch to fix back the portio vaginalis. If the upper and back part of the vagina be roomy and relaxed, a condition in which it very commonly

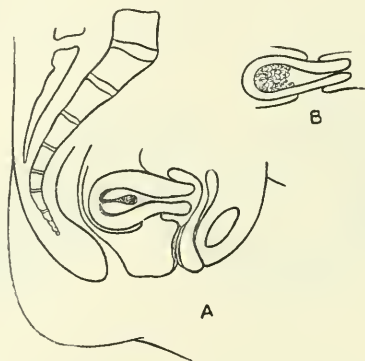


FIG. 6.—(A) Complete retroversion. Pouch of Douglas occupied by fundus, with pedunculate polypus in the cavity. Rectum encroached on and the bladder drawn upwards and backwards.

(B) Same uterus with fungoid or carcinomatous mass in fundus. (H. M.-J.)

is in retroflexion, we may stretch the vaginal vault as far backwards as ever we like without thereby compelling the vaginal portion to remain in the back of the pelvis; it slips forward in the loop of pessary, and though the latter is in a proper position, the uterus falls back over it into retroversion, just as if it were not there at all.

“It is only when the vagina is fairly rigid as well as long, and where there is no tenderness in the posterior vaginal vault—a combination of circumstances not often found with retroversion—that Hodge’s pessary actually

replaces the uterus, forces the vaginal portion into a posterior position, and thereby transfers the intra-abdominal pressure on to the posterior surface of the uterus.”

There are certain points which must be remembered in regard to all pessaries : First, the consequent stretching of the vaginal walls and the distension of the canal, especially at its uterine end. Secondly, the necessity for perfect mobility of the pessary. Thirdly, the need for adaptation in size and shape of the pessary to the dimensions of the canal, and to the length of the portio vaginalis. The support should not interfere with the normal acts of

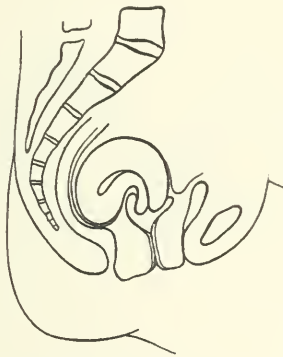


FIG. 7.—Large retroflexed uterus, obliterating the pouch of Douglas and pressing on the rectum, drawing the fundus of the bladder backwards. (H. M.-J.)

defæcation, nor impinge on the neck of the bladder or urethra so as to cause either distress to the bladder or impediment to micturition. The main points to be considered are—the capacity of the vaginal fornix, the length of the canal, and the size of the portio vaginalis ; after the application of the pessary, the comfort with which it is worn while standing, walking, and sitting in different positions, and the absence of any sense of distension or pressure. In order to fulfil its action in retrodisplacement and support the uterine fundus, while it retains it in position, its posterior curve should be such as to so occupy the

posterior fornix as to prevent a doubling over of the uterus on the pessary during such acts as those of defæcation, any strain of the abdominal muscles in lifting weights or during fits of coughing, and the unavoidable pressure resulting from over-distension of the bladder. A pessary also should be as light as possible consistent with its strength and hardness. The material should resist the corroding or solvent action of the vaginal secretions, and be one which can be easily kept clean. The rings I show are of two kinds; the first are my own celluloid and wire rings, made for me many years since by Arnold. They can be moulded into any form desirable. The others are Schultze's celluloid rings. These are the most perfect that can be conceived.

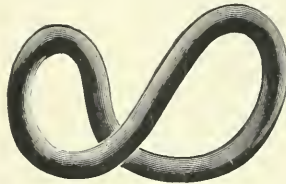


FIG. 8.—Celluloid wire ring finally moulded.

They are so light that the weight of the ring is hardly felt. On the other hand, when moulded by means of boiling water they become very hard, and though elastic *never alter their shape*.

When the position of the uterus is such that a pessary can be taken out and replaced by the woman herself, it is well that it should then be of a kind that will enable her to do this easily. Obviously she cannot replace any but the simpler forms, such as a glycerine ring or simple Hodge. The more sharply curved pessaries, a Fowler's or Galabin's, she cannot replace on, but she ought to be taught how to remove any pessary. Such conditions involving the application of an ordinary lever pessary cannot be fulfilled unless it be moulded at the time according to the anatomical peculiarities of the vagina and uterus. Nor can this

frequently be decided on its first adaptation. It has to be worn for a certain time before its efficacy and comfort can be finally determined. The application of a pessary without such determination as to its suitability from these points of view is obviously wrong. What we want specially to avoid is that over-distension of the vaginal walls which leads to an atonic condition of the muscular structure and subsequent relaxation of the vesical and utero-rectal supports. Even supposing that a uterus be kept in position temporarily by such over-stretching, when the pessary is removed the tendency is to recurrence of the



FIG. 9.—Fowler's cradle pessary in position. (H. M.-J.)

deviation, and the last state of the woman is often worse than the first, relaxation of the vagina assisting in the downward and backward movement of the uterus.

If we look at a Fowler's pessary, we see that its posterior projection rests against the junction of the infravaginal with the supravaginal cervix, tilting the latter, with the fundus, forwards, while the smooth and convex surface of the bowl fills the posterior fornix. The narrow end of the cradle lies in front of the cervix against the vaginal wall, and should not press on the urethra. The pessary itself should be made in one piece, so that there can be no chance of any want of continuity which would permit

the entrance of vaginal secretions into the hollow space between its walls.

Such pessaries as those I have mentioned, if properly adjusted to the individual case of retrodeviation, assuming that any form of pessary will maintain the uterus in anything approaching its normal axis, exert their action by tilting forward and at the same time supporting the fundus, the cervix being thrown backwards. No bad effects follow. A ring of any kind is quite different. It is not a lever in the sense of the Smith-Hodge, and does not support the uterus in the same manner. A movable ring lying

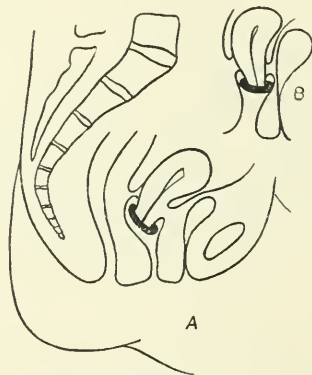


FIG. 10.—(A) Glycerine ring in position in the vagina. Uterus has been replaced, but not quite in the normal position.

(B) Effect on same uterus by over-distended bladder. (H. M.-J.)

obliquely in a rigid unrelaxed vagina is useful, but in the majority of cases of retroflexion in a relaxed vagina it is absolutely useless. It plays as active a part in retaining the uterus in position as the ring on the woman's finger.

With regard to stem pessaries, I can only repeat what I have several times said and written. For years I have not inserted one into the uterus save after an operation for stenosis and ante flexion, and then only rarely. In few cases is the use of a stem required, and the risks incurred during the time it is worn, the constant supervision required

from the medical attendant, and the unpreventable carelessness of patients, render its employment particularly hazardous in busy general practice. I am always uneasy while a stem is in the uterus, and in applying it give the patient strict injunctions regarding rest and medical supervision. I never place one in the uterus immediately before a menstrual period, and, when one is worn, I remove it on the approach of a period. I always teach the patient how to remove the instrument by means of a string attached to its lower end, and direct her to do so on the least indication of uneasiness, pain, chill, or a feeling of



FIG. 11.—Celluloid stem of author.



FIG. 12.—Method of moulding the figure-of-eight ring. (Schultze.)

general *malaise*. No stem should be placed in the uterus if there be signs of recent perimetritis, or during an inflammatory state of the endometrium. I use a smooth, straight, or slightly curved stem, such as my celluloid bulbous one. The stem should not reach the fundus of the uterus.

I have removed stems which had been worn in the uterus for months, and, apart from my pity for the patient, my regret was that the person who had placed the stem in position was not present to learn a lesson from the effects of its sojourn there.

Schultze, speaking of intrauterine stems, in connec-

tion with flexions, regards one as a suitable addition provided there be no active inflammation present, preferring the independent stem to the combination of pessary and stem, and only using it where the flexions are such that they cannot be permanently adjusted.

"They are," he says, "the only cases in which, with our present knowledge of the normal and abnormal positions of the uterus, there can be any indication for their application.

"The more cases of retroflexion I have to treat, the fewer are those in which I meet with this exceptional indication for the use of intrauterine pessaries. Years have repeatedly passed without my coming across it, because in all cases of the sort coming under my observation, in which the circumstances were not such that I had for the time to abstain from reposition, either the peritoneal adhesions which caused the anomalous position of the uterus were discovered and removed, or the action of the parametric cicatrices could be compensated with vaginal pessaries of appropriate shape."

The views Professor Schultze held some years since are practically those he advocated in 1898, which, he says in a letter to me, "hold as good now as when they were written."

In regard to anteversion and anteflexion, though we still have to include degrees of the former condition in our text-books, we all now know that it is not correct to speak of an anteverted womb as a displacement. If the womb leans forward at an angle of forty-five degrees and upwards, it is then out of the normal plane and has an abnormal relation to the pelvic axis, and may then require support. Anteflexion is a different state. Most frequently it is not merely the abnormality we have to deal with, but we have also present stenosis of the uterine canal, possibly enlargement from hyperplasia, or tumour in the anterior wall of the fundus.

"I have learned to unlearn," says Goodell, "that

anteflexion and anteversion in themselves, that is to say, as displacements merely, and without narrowing of the uterine canals, are necessarily pathological conditions of the womb"; and he goes on to urge the mistake of attributing to this natural position of the womb such an affection as irritability of the bladder, naturally dwelling on this frequently occurring symptom, which is often attributed to pressure of the uterus when it is in reality due to an impaired nervous system with lack of brain control. "Upon making a vaginal examination, the fundus of the womb is found resting on the bladder, where it naturally should

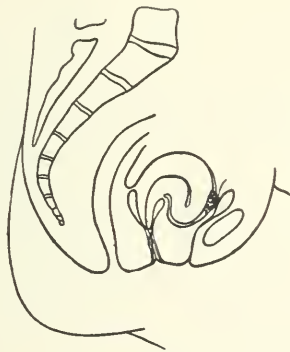


FIG. 13.—Anteflexed uterus with elongated cervix pressing on bladder, altering the position of the pouch of Douglas, and drawing on the rectum. Ovary prolapsed anteriorly. (H. M.-J.)

rest, and the conclusion is jumped at that the whole trouble is due to the existing natural anteflexion or anteversion, as the case may be. The surgeon racks his brains to adapt or devise some pessary capable of overcoming the supposed difficulty, heedless of the dilemma that the upward or shoring pressure of the pessary on the bladder must be greater than the counter or downward pressure of the womb to which he attributes the vesical irritability."

For my own part, I have not, in anteflexion, for years used any pessary save one which I have either moulded

myself from a ring, such as I show here, or a Galabin, which it practically resembles.

Ventrosuspension of the uterus, or the enucleation of

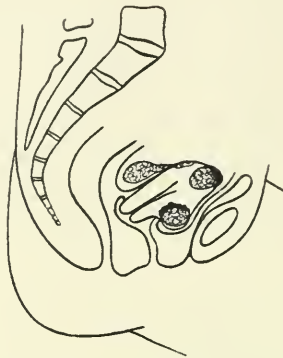


FIG. 14.—Myomatous uterus—nucleus in anterior wall pressing on bladder—pedunculated tumour in the pouch of Douglas. (H. M.-J.)

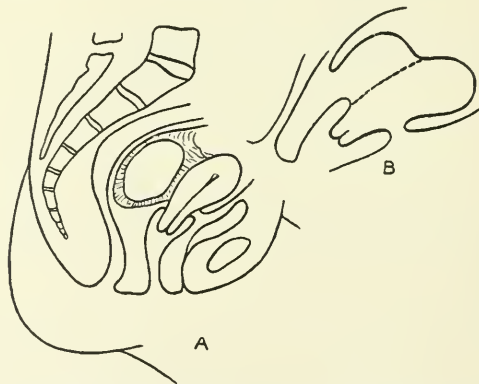


FIG. 15.—(A) Pouch of Douglas occupied by a large pyosalpinx adherent to the uterus or incorporated with it and altering its position—mistaken for retroflexion. This may be a myoma, an ectopic sac, an ovarian cyst, or a tumour of the mesosalpinx or Fallopian tube.

(B) Idea of the nature of tumour conveyed on examination by vagina and rectum, confusing it with myoma. (H. M.-J.)

a myoma, will rapidly and completely cure symptoms of bladder trouble, even in cases where a urinal has to be worn.

I may now briefly summarise the pathological conditions which contraindicate the use of any pessary, and where its presence constitutes a distinct danger. (1) Displacements which are associated with inflammatory states of the endometrium, until such endometritis be cured. (2) Those which are complicated by adhesions, rendering restoration of the uterus to its normal position impracticable. (3) Those associated with adnexal tumours and inflammatory conditions of the ovaries and tubes. (4) Those complicated by other than adnexal tumours in the pouch of Douglas, such as an enlarged, sensitive, and pro-



FIG. 16.—(A) Large uterus encroaching on the bladder, which is elongated as the result of pressure and over-distension. Loaded rectum pressing on adnexa in the pouch of Douglas.

(B) Galabin's pessary supporting the uterus.

(C) Galabin's pessary supporting uterus with myoma in anterior wall. (H. M.-J.)

lapsed ovary, cysts of the ovary or mesosalpinx, pus cysts of tube or ovary, ectopic sacs, pedunculate myomata, solid tumours of the ovary or Fallopian tube. (5) All cases in which, after reasonable trial of a pessary and palliative treatment of the displacement, the prolonged use of a pessary is necessitated, inasmuch as without the latter the displacement recurs, and when, even with the pessary *in situ*, the uterus cannot be kept in the normal position.

It is altogether unsurgical to consign a woman to the life-long burden of an irksome appliance in the vagina.

In my own experience I have seen, not once but several times, pessaries worn when one or more of those pathological conditions I have enumerated have been present. It is not necessary to dwell on the risks and dangers thereby entailed. Nor is it any matter for surprise that such conditions have not been detected when *complicating* a retroflexion, for they are out of reach, and, save under an anæsthetic and by the bimanual method, it is impossible

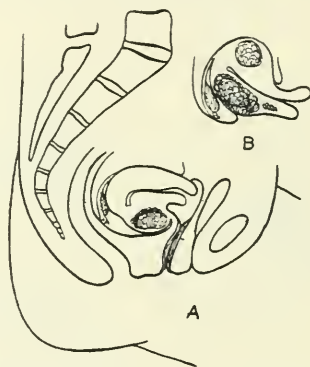


FIG. 17.—(A) Myoma in posterior wall of retroflexed uterus. Ovary and tube in the pouch of Douglas.

(B) Myomatous anteverted uterus, which has become retroverted. (H. M.-J.)

to detect their presence. And even with this advantage the most experienced gynæcologists are liable to err in diagnosis. It may be thought more inexcusable to confound the occurrence of any of these conditions with a retroflexion, but here, again, so intimately associated are certain growths—cystic tumours, pus sacs, and solid tumours—with the uterus, so hard and resistant do they become, and so difficult is it to dissociate and define what is uterine from that which is extrauterine, that it is a matter of common knowledge that operators of the highest skill and the widest experience have not detected the error of diagnosis until the abdomen has been opened. How much less, then,

is the surgeon in general practice to be blamed if he fail occasionally to differentiate a mass in the pouch of Douglas ! I have elsewhere recorded some such "pitfalls" in my own practice, and have been present when even the most wary have slipped. Only lately I saw a case in which a pessary had been worn for some time, an opinion afterwards being given that there was nothing seriously wrong. Finally, a distinguished surgeon pronounced the case to be one of myoma, another experienced gynæcologist viewed it as a case of inoperable carcinoma. I came on the scene, and concurred in the view of myoma. It turned out to be one of old infiltration with pyosalpinx.

Quite recently I operated upon a case the full particulars of which I intend soon to report, with a peculiar history. The facts would fit in with the presence of an ectopic gestation sac, a molar pregnancy, or a long-standing pyosalpinx, forming a hard adnexal tumour in Douglas's pouch. The latter was the view I took in the first instance. Under anæsthesia, before operation, by bimanual examination, different views were expressed as to the nature of the tumour. Before proceeding to open the abdomen, I proved with the sound that the uterus was in its proper position, and that the mass was not part of the uterus, though closely incorporated with it. One of the most experienced of Continental gynæcologists was present at the operation.

On exposure of the pelvis, an old infiltration was found extending from side to side, raising the broad ligaments and extending as far as the second lumbar vertebra ; the mass behind the uterus, which was firmly incorporated with it, proved to be a large infiltration, communicating with a pyosalpinx, and tunnelled through by a portion of the bowel.

When we ourselves trip and stumble into one of these pitfalls, we usually feel what an American cells "pretty bad." Is it a brotherly feeling that makes us so sympathetic to a fellow-traveller on the same road that we cannot

restrain the desire to talk of his misfortune? Or, is it the philanthropic motive to make him serve as an object-lesson which may prevent others from following in his rash footsteps?

An ovum of half truth, when impregnated by the dual germs, insatiable love of gossip and cancrus jealousy, develops not infrequently into a twin monster of insinuation and falsehood, which even its original generative force would not recognise as its own conception. Let, then, the Gods of gynæcology be lenient in their judgment on the errors of the less infallible mortals, who, treading the rougher highways and byways of general practice, occasionally make such mistakes as those I have referred to—mistakes to which even the immortals themselves have been proved to be liable.

All I have here said with reference to my second question tends to show that a pessary is not the harmless appliance it is generally thought to be, and that before it be applied it is our duty, by bimanual examination, and, should doubt exist, under anæsthesia, to exclude those often obscure pathological conditions which altogether contraindicate its use.

I need not refer to the dangers of allowing a pessary to remain too long in the vagina without being cleansed or changed. I once showed at this Society a ring pessary which had been worn for nine years; it was covered with a calcareous coating, and had worn a deep groove in the walls of the canal. It is not so very long since that I removed a pessary which had been worn without change for five years. Such occurrences should not be possible were the dangers emphasised to the patient when leaving the immediate care of the surgeon who inserts the pessary.

As to the best forms of pessary for application under the different circumstances in which they are indicated, I believe that for retroversion or retroflexion the well-curved S pessary, which the practitioner himself moulds for the vagina in which it is to rest, and adapts for the uterus

that it has to keep in position, is the safest and best. After the uterus has been replaced, and where we suspect that it will not remain as we have replaced it, a Fowler's pessary, carefully selected as to its size, is an admirable one. So, also, are the celluloid cushion and Schultze's figure-of-eight.

When we require a pessary for anteflexion or extreme forward displacement of the uterus, Galabin's pessary, which can easily be kept clean and be worn without change for some months, I consider the best. Here, again, the most important points are its width and length, as if these be not attended to the pessary is certain to cause distress. Also, care must be taken in its removal, for if roughness be used in abstracting it, considerable pain will be caused, and the outlet may be bruised and injured. The pessary has to be turned by the finger with the long axis of its arched portion corresponding to the long axis of the outlet, and the perineum should be well drawn back so as to permit of the escape of the broad portion of the pessary.

Where the uterus is anteflexed, and there is a myoma in its anterior wall, or where there is relaxation of the vagina, with tendency to cystocele and prolapse, with attendant reversion, it is as good a support as we can use. It does not prevent conception. If a Galabin be not at hand, a pessary much on the principle of Schultze's sledge-shaped one can be fashioned from a celluloid ring and adapted in size and shape to the anatomical conditions of the individual case. It acts much in the same way as Galabin's and is useful under similar conditions.

With regard to prolapse, in its earlier stages, when retroflexion is the first consequence of relaxation of the utero-sacral folds, and where reposition of the uterus is called for as a palliative measure, a pessary is of use, and a celluloid cushion support or one moulded for the case from a ring is indicated; a glycerine ring of suitable size often affords considerable relief. But when both the uterus and vagina begin to descend, when the uterus is retro-

flected, while the vaginal outlet is relaxed, and there is prolapse of some portion of the vaginal wall, operative measures are called for, and a pessary of any kind is injurious, and becomes more so in proportion as the vagina is stretched by it. By early operative measures, those more serious ones which have to be considered in the later stages of procidentia will, in all probability, never have to be undertaken. Hardly any of those cases in which

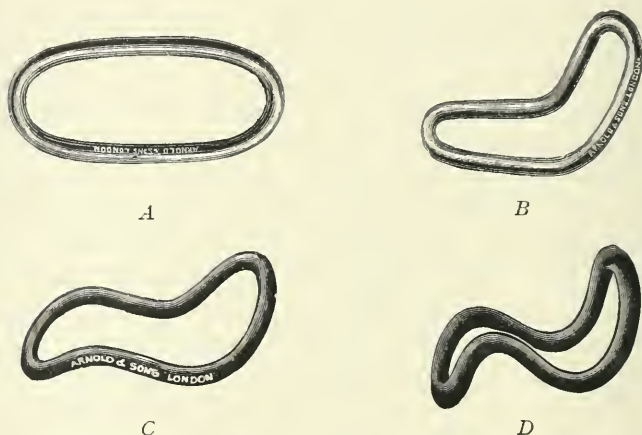


FIG. 18.—Moulding of Schultze's ring into an S-shaped pessary. (A) first shape; (B) second shape; (C) third shape; (D) fourth shape.

operations on the utero-sacral ligaments, extirpation of the vagina, in whole or part, or removal of the procident mass, are indicated, would ever occur were suitable operative steps taken, instead of the attempt being made to palliate the woman's troubles by resort to an appliance which is not intended to cure, and, as a rule, aggravates the mischief. For those who will not consent to operation, the best support will be that which is moulded by the surgeon himself to suit the degree of the prolapse, and in some extreme cases under the same circumstance, Godson's wire modification of Zwancke's pessary, if care be taken with regard to cleanliness, I have known to afford the greatest relief.

I trust that I have shown that a pessary, whether we view it from the point of view of the positive mischief it may do or the negative consequences that follow its use by delaying suitable and efficient treatment, is not the harmless agent it is often thought to be.

The moulding of the ring is accomplished thus: Having carefully examined the vaginal roof, and noted the size required, a few rings are taken and thrown into a basin of very hot water; when they are pliable one is given the shape shown in fig. 18—*A*. The ring is again thrown back into the water for a few seconds, and on being withdrawn it is given the form shown in fig. 18—*B*. It is again immersed, and after removal the second curve is made (fig. 18—*C*). After a few seconds' final immersion, the pessary may be made to assume the exact shape desired, and the arms of the lever brought to the proper length and angle required (fig. 18—*D*, shape advised). The pessary is next thrown into cold water, and left in it for a few minutes to set. The red celluloid rings are not so liable to crack in moulding, and possibly they keep better than the transparent kind.

On the motion of Dr. HEYWOOD SMITH, it was agreed to postpone the discussion of the paper to a future meeting of the Society.

ORIGINAL COMMUNICATIONS.

DEDUCTIONS FROM THE STUDY OF PELVIC DISEASE
IN THE FEMALE INSANE.¹

By ERNEST A. HALL, M.D., L.R.C.P.Edin.

Fellow of the British Gynæcological Society.

It is not my purpose to give a *résumé* of all that has been done in investigating the causes of mental disease associated with abnormal conditions of the pelvic organs, nor to endeavour to attempt any solution of the problem of the correlation of the physical with the psychic disorders, but to offer you a few deductions which are the product of several years of careful study of pelvic diseases as causative of abnormal mentality. My point of view is that of a general practitioner, and I shall deal with this matter as it has appeared to me in private practice. It is, I know, only necessary to call your attention to the alarming increasing prevalence of insanity upon this continent, and the ever-increasing burden that is thus entailed upon the State, and to the shadow cast upon many of our best families by a history of mental disease, to arouse your interest in any measures whose object is alleviation of the sufferings or diminution in the number of those unhappily so affected. In the etiology and treatment of insanity we have a problem second in importance only to the eradication of cancer and the control of tuberculosis.

That the attention of the profession has been aroused on this point is shown by the fact that in many recent text-

¹ A Paper read at a meeting of the British Columbia Medical Association in Vancouver (*cf. ante*, vol. xvi., p. 242). Dr. Hall's work is alluded to by Fredericq (*infra*, Summary, p. 1).

books on gynæcology, a chapter is devoted to the relationship between abnormal mental conditions and pelvic disease. The necessity of such investigation will be brought home to you, perhaps to your surprise, when I state that of 109 patients examined by me who were suffering from well-marked mental abnormality, I found decided pathological conditions of the pelvic organs in 99, or 90 per cent. Other investigators have had the same experience: Dr. Tyler, of Denver, reports that less than 10 per cent. of female lunatics have normal organs; and Dr. Hobbs, of Guelph, and formerly of London Asylum, found that 89 per cent. had pelvic lesions. Reports from other asylums, where careful examinations are made, give somewhat similar results.

Without going further into statistics, which would tend to show, in the first place, that pelvic disease and insanity are frequently associated, and secondly, that such disease should receive appropriate treatment, in the insane, just as in those who are not mentally affected, and that insanity is no excuse for neglecting the treatment of pelvic disease—matters upon which I shall assume that we all agree—I have now to make some statements which I cannot expect you to accept unanimously.

(1) Whenever the physical condition of an insane woman, owing to pelvic or other disease, necessitates abdominal section—should the surgical interference, otherwise necessary, not render her inevitably sterile—it is the duty of the surgeon, with the consent of the husband or friends, to render her incapable of reproduction by the slightest operative procedure necessary to accomplish the purpose.

(2) Given a history of recovery from one or more attacks of insanity in a woman exposed to conception, we are justified, with the consent of the interested parties, in rendering her sterile, more especially so if the mental trouble has been associated with childbed.

(3) Given a first attack of insanity in a woman of good family history, even if a thorough examination by the

best skill obtainable fails to detect any physical lesion, considering the surprises often met with upon abdominal section, and the many pathological conditions within the abdomen that cannot be determined by external methods of examination, considering also the fact that persistent insanity may doom the patient to a condition worse than death, while the risk of the operation is little more than that of the anæsthetic, we are justified in opening the abdomen for the purpose of examination.

(4) Considering that, on the somatic basis of insanity, mental disease is but the psychic sum of physical abnormalities, that the recovery rate is greater when the habit of vicious cortical metabolism has not yet been established, we should concentrate our efforts upon the treatment of recent cases, and endeavour to remove the underlying lesion or lesions as early as possible. To facilitate this, provision should be made in connection with each of our city hospitals for the reception and treatment of recent cases of insanity; they should remain there, for a few months, under the care of their family physician, associated preferably with specialists in internal medicine, nervous diseases, and a surgeon (which latter term now includes a gynæcologist); and if after a time there was no indication of recovery, they should be transferred to the Provincial Hospital. It would, of course, be folly to detain cases of general paresis or senile dementia.

This suggestion is not made with the purpose of reflecting upon our provincial asylum, which is as good as it can be under the present system, while the superintendent is one of the ablest in the dominion; but the associations of the asylum are not those in which any of you would care to see your mother, wife, or daughter placed, except as a last resort; nor are such associations calculated to restore weakened bodies or to recuperate exhausted nerves. Until all other methods of treatment at our disposal have been exhausted, we should not desire such an environment for any one dear to us.

REVIEWS.

A TEXT-BOOK OF GYNÆCOLOGY. Edited by CHARLES A. L. REED, A.M., M.D., Professor of Clinical Gynæcology in the Medical Department of the University of Cincinnati; ex-President of the Medical Association, &c., &c. Illustrated by J. R. Hopkins. Second Edition, revised, royal 8vo, pp. xxv. and 900. New York and London: D. Appleton and Co., 1904. Cloth. Price 25s.

Since its first appearance, about four years ago, this book has been reprinted several times without alteration. In the present issue room has been obtained by the omission of relatively unimportant paragraphs to give more details in regard to some points of treatment and technique—but no complete revision has been attempted; the printer's errors, mostly misspelling of foreign names, continue the same. Professor Cameron is still allowed to make it a condition for Cæsarean section that the conjugate diameter should be "not under" instead of "not over" $1\frac{1}{2}$ inches, though we know that this *lapsus calami* has been corrected in another publication of his paper; and Dr. Ballantyne to imply that the sexual glands do not appear till the fifth or sixth *month* of utero-gestation. Owing to the rewriting of part of the chapter on Abdominal Section, Dr. Clark is more fortunate, for he is no longer charged with the statement that "Great quantities of organisms which ordinarily produce no disturbance may give rise to a general *ascpsis*,

if the absorptive ability of the peritoneum is impaired." In the same chapter Dr. Reed has rewritten the remarks on Drainage very strongly in favour of the vaginal route, and of sterile, in preference to iodoform, gauze, and has added some pages on treatment after abdominal section. He has greatly improved the chapter on the Pelvic Floor and its Injuries by considerable alteration and the addition of three new illustrations. In the chapter on Displacements of the Uterus, a new paragraph is inserted laying stress on the disadvantages of ventrofixation during child-bearing age, and some remarks on the technique for operating on ectopic pregnancy when the child is viable have also been rewritten.

For more detailed appreciation of the book as a whole we must refer our readers to the review of the first edition in this JOURNAL (vol. xvii., p. 165). The book is undoubtedly a good one, rich in good pathology, and well-illustrated details of operative technique, and its value to the practical gynaecologist is considerably enhanced by the chapters on the Urinary Apparatus and Rectum, with directions for the necessary physical examination of bladder, ureter and lower bowel. But though re-reading it has been a pleasure, the revision has not materially altered the book, and its merits and demerits remain much the same as those of the first edition.

A SHORT PRACTICE OF GYNÆCOLOGY. By HENRY JELLETT, M.D., F.R.C.P.I., ex-Assistant Master, Rotunda Hospital; Examiner in Midwifery and Gynæcology, R.U.I. and R.C.P.I., and late Examiner, Dublin University, &c., &c. Second Edition, revised and enlarged, with 223 Illustrations. Demy 8vo, pp. xiv. and 406. London: J. and A. Churchill, 1903. Price 10s. 6d.

It is not surprising to find that a second edition of Dr. Jellett's "Short Practice of Gynæcology" is necessary

little more than three years after the publication of the first, but it is by no means the same book. Though he has omitted all detail that he could consider unnecessary or irrelevant, and is as we have noticed, as concise in style as is compatible with clearness, in order to make the book as complete and modern as might be, he has had to make considerable additions to the text, and very nearly double the number of the illustrations. We reviewed the first edition shortly after it appeared (*ante*, vol. xvi., p. 263) and on comparing the two must congratulate Dr. Jellett on the additions he has made, particularly as regards the original pathological illustrations, and those which by the courtesy of Dr. Roberts and others he has been able to reproduce, and which render the study of gynæcology at its commencement so much more interesting to the student. The additions to the text are valuable, the index, however, is not complete, and would lead one to suppose that neither cystoscopy nor atmokausis were properly recognised. From Dr. Jellett's connection with the Rotunda and the prefaces to the two editions, the book may be accepted as an exposition of the gynæcological practice at the Rotunda Hospital, under the masterships of Sir Arthur Macan and Dr. W. J. Smyly, and we can heartily recommend it to the student as an excellent introduction to the practical study of the diseases of women.

VAGINAL TUMOURS, WITH SPECIAL REFERENCE TO CANCER AND SARCOMA. By W. ROGER WILLIAMS, F.R.C.S. With 5 Illustrations, demy 8vo, pp. x. and 92. London: John Bale, Sons, and Danielsson, Ltd., 1904. Price 5s. 6d.

In this monograph Mr. Williams endeavours to co-ordinate and arrange in a concise and accurate manner the immense accumulation of details relating to the etiology, pathogenesis, minute anatomy, general pathology and life-history of vaginal tumours, and few men, as his articles

in the *Medical Record*, 1901, and in other journals in 1902, are better fitted for the task, formidable as it is.

Though cancer and sarcoma are made so prominent in the title, nearly half the book is devoted to myoma and other non-malignant tumours, including cysts. The latter part has proved the most interesting to ourselves, as in nearly all cases the origin of these cysts is to be referred to "inclusions" or "rests" of the ducts of Wolff or Gartner. The monograph does not aim at including all that has been brought forward, or at affording any original work, but is a convenient condensation of what is accepted in regard to vaginal tumours.

DIE BEKAEMPFUNG DES UTERUSKREBSSES, EIN WORT AN ALLE KREBSOPERATEURE. Von Dr. GEORG WINTER, Ord. Professor und Director des Universitaets-Frauenklinik in Koenigsberg, i. Pr. Royal 8vo, pp. 76. Stuttgart : Ferdinand Enke, 1904. Price 2 M.

DER ERFOLG DER BEKAEMPFUNG DES UTERUS KREBSSES IN OSTPREUSSEN. Von Dr. GEORG WINTER, &c., &c., (*Zentralblatt fuer Gynaekologie*, 1904, No. 14.)

The mortality of uterine cancer, due to the fact that so many cases are allowed to advance too far for operation, is admittedly enormous. In 1895, at the meeting of the British Medical Association, the late Mr. Knowsley Thornton appealed to the members in general practice never, in case of irregular hæmorrhage or vaginal discharge, to neglect internal examination and never to treat any suspicious case expectantly, but to refer it at once for operation. Dr. Lewers, in an article in the *Practitioner* in 1902, in order to promote the early diagnosis of cancer of the uterus, urged that women, generally, should be made acquainted with the early symptoms of the disease, especially with the significance of anomalous hæmorrhage, and suggested that the cancer commissions of the Royal Colleges of Physicians and Surgeons might well issue leaflets, conveying

the necessary information, to all medical men, for distribution to suitable persons, and to the matrons of all hospitals to give to every nurse trained under their authority. In the same year, Professor Japp Sinclair, in his address on obstetrics at Manchester to the British Medical Association, attributed the vast number of cases in which uterine cancer was allowed to advance too far for operation, to the prevalence of the idea that hæmorrhage after the menopause was not any cause for alarm, to the belief that pain was an early symptom, to delay on the part of the patients in seeking advice, and to the negligence of general practitioners about making an internal examination; he quoted with approval the suggestions made by Dr. Lewers.

Professor Winter began to do battle with uterine cancer in 1891, at Berlin, and by investigation of the histories of the cases at the University Poliklinik was able to assign three factors as the chief causes of neglected and advanced cancer of the uterus: (1) Deficient knowledge on the part of medical men; (2) unconscientiousness on the part of midwives; and (3) the conduct of the patients themselves. In his present sphere of work he has commenced an active campaign against these evils, and in December, 1902, he sent to every practitioner in East Prussia a pamphlet (in a covering letter) describing the symptomatology and diagnosis of cancer, impressing upon them the absolute necessity of internal examination in every suspicious case, giving details of the technique for securing specimens for diagnosis, and placing his laboratory at their disposal so that their patients might, if possible, be spared the pains and expense of an unnecessary journey, and the practitioner still have the credit of understanding the case. To every midwife he sent a flysheet pointing out that gynæcological disease was outside their province and that it was incumbent upon them to refer all such cases to a medical man, giving also the characteristic symptoms of uterine cancer, and urging them to insist upon any woman, who complained of such, consulting a doctor forthwith.

But Professor Winter found that the conduct of the patients themselves was far the most potent cause, and feeling that every woman should know that cancer can be cured by operation, but only in its earliest stages, he published, early in 1903, in all the leading newspapers of the province, "A Word of Warning to Womankind," a popular exposition of the Dangers of Cancer of the Uterus, so worded as to be easily understood and yet not excite morbid fear of the disease. These three documents are reproduced in the notable monograph before us, as also a circular interrogatory letter addressed to the medical profession. In his article in the *Zentralblatt* he is able to report the very satisfactory results obtained by these measures even in 1903, the first of his campaign. In that year, no single physician, save one homœopath, laid himself open to blame by neglecting to make an immediate internal examination of a suspected case; microscopical examination for diagnosis was resorted to in thirty-nine cases more than in the previous year; out of seven midwives consulted by patients, only one behaved improperly; the proportion of patients who sought advice within three months of the earliest symptom rose from 32 to 57 per cent., and that of those who followed the advice for operation within fourteen days of receiving it, from 78 to 90 per cent., and the operability of cancer of the uterus in East Prussia increased from 62 to 74 per cent.

In a review of this very remarkable monograph, in the same number of the *Zentralblatt*, Baisch, of Tuebingen, mentions that in Wuerttemberg, 77 per cent. of the women with uterine cancer consulted their family doctor; that 14.6 per cent. of these doctors made no internal examination at all; that of those who on doing so found operable cancer, only 57 per cent. advised operation immediately, and though 30 per cent. more did so later, sometimes not for months, 13 per cent. never did so at all. Midwives were consulted by 16 per cent. of the patients, and kept more than half the cases under their own care.

It is earnestly to be hoped that the Royal Commissioners, and the Central Board of Midwives, may consider these facts, and that measures not less active than those suggested by Dr. Lewers and Professor Japp Sinclair may be taken to "stay the plague" in the United Kingdom.

ORTHMANN'S HANDBOOK OF GYNÆCOLOGICAL PATHOLOGY, FOR PRACTITIONERS AND STUDENTS. Translated by C. HUBERT ROBERTS, M.D.Lond., F.R.C.S., M.R.C.P., Physician to the Samaritan Hospital, &c., &c.; assisted by MAX L. TRECHMANN, F.R.C.S., M.B., C.M. Demy 8vo p.p. xvi. and 128, with 36 Plates. London: John Bale, Sons and Danielsson, Ltd. Price 5s.

We reviewed Dr. E. G. Orthmann's "Vademecum fuer histopathologische Untersuchungen in der Gynaekologie" just three years ago, so may refer our readers back to vol. xvii., p. 89, in regard to the matter of his excellent work. The translation before us forms an admirable supplement to Dr. Roberts's "Outlines of Gynæcological Pathology." The diminished number of pages is accounted for by the figures appearing on plate paper instead of in the text as in the original. This is an improvement as regards the microscopical sections, but must have very materially increased the cost of publishing the work, which is nevertheless issued at the same price as the German edition.

The English text reads well, but in the preface there is a mistranslation which implies not only that there is such a thing as normal pathology, but also that the normal histology of the female sexual organs is dealt with in the second part of the book; Dr. Orthmann, on the contrary, saying that "in order not to overstep the prescribed limits of the book he must presuppose the normal histology known." We wish we could say this was the only instance of carelessness in the translation.

THE PRACTICE OF OBSTETRICS : Designed for the Use of Students and Practitioners of Medicine. By J. CLIFTON EDGAR, Professor of Obstetrics and Clinical Midwifery in the Cornell University Medical College ; Attending Obstetrician to the New York Maternity Hospital. Imp. 8vo, pp. 1,111, with 1,221 Illustrations, many of which are in Colours. London : Rebman, Ltd., 1904. Half Persia leather. Price 30s. net.

In this large and handsome volume Dr. Edgar gives the results of fifteen years' experience in practical midwifery and clinical and didactic teaching. Our notice of it has been unavoidably delayed, and we can now heartily endorse the warm approval with which it has been received on both sides of the Atlantic. No single work on Obstetrics in the English language has appeared so well calculated to meet the requirements of those engaged in, or in course of training for, the practice of midwifery. It is clearly written without prolixity and is eminently readable, the arrangement of the matter is at once logical and practical.

To avoid repetition, Dr. Edgar begins the first of the ten parts into which the book is divided, with the physiology of the female genitalia ; indeed, except what was necessary in regard to the pelvis and its contents in connection with pregnancy and labour, anatomical descriptions have been omitted. Eight parts are devoted successively to the physiology and pathology of pregnancy, labour, child-bed and the new-born, and the last to Obstetric Surgery, followed by an appendix on case taking.

In the pathology of pregnancy much space is devoted to the diseases of the decidua, membranes, umbilical cord, and to the antenatal pathology of the foetus. The classified table of monstrosities is supplemented by a large number of illustrations, chiefly from Ahlfeld's Atlas, and by a convenient etymological key. Deformity of the pelvis and cephalometry are very completely discussed, and though Dr. Edgar is not unduly narrow as to the indica-

tions for the induction of labour, even admitting that the question merits consideration in the "Candidate for tuberculosis," as well as for serious maternal, general, or local diseases, he condemns any prophylaxis against conception except chastity or excision of part of each tube.

The necessity of asepsis and antiseptic, as might be expected, is urgently advocated; the author cannot too strongly recommend the use of sterile rubber gloves, as a routine practice in all confinement cases. Though, in his opinion, no internal examination may be required in normal cases, and meddling midwifery is bad, the physician's object should not be to do as little as possible, but to watch the course of labour so carefully as not to lose the proper opportunity for interference; one internal examination is desirable before, and perhaps one after, the rupture of the membranes, and in a normal case should be sufficient. In the third stage, care against infection is still more imperative, and no internal manipulation which is not absolutely indispensable should be undertaken; we, therefore, are rather surprised that the author, who discountenances vaginal douching before labour, allows a single douche after it, to promote the patient's comfort. An intra-uterine douche he never employs unless an instrument or the hand has been introduced into the cavity.

Nearly a hundred pages are given to the physiology and pathology of the new-born; artificial feeding is carefully discussed, and a useful table of formula given for the home medication of milk. In the treatment of asphyxia neonatorum, Byrd's method, varied in the apoplectic form with a few swings in Schultze's way, is recommended.

The barbarism, "choriitis," on p. 211, is probably a printer's error, if not it has been repented, as is shown in the index, but there are few such mistakes, and the type, paper, and binding, leave nothing to be desired. The numerous illustrations, generally well chosen and well executed, are hardly ever superfluous. Altogether, we can heartily congratulate the author on his work, and on the way his publishers have produced it.

SURGICAL DISEASES OF THE ABDOMEN, WITH SPECIAL REFERENCE TO DIAGNOSIS. By RICHARD DOUGLAS, M.D., formerly Professor of Gynæcology and Abdominal Surgery in the Vanderbilt University, Nashville, &c., &c. Large 8vo, pp. xii. and 884, Plates xx. London: Rebman Ltd., 1903. Price 30s. net.

Now that the surgeon is daily more and more invading the domain of the physician, and nowhere more so than in abdominal affections, one would expect that in a treatise on surgical diseases of the abdomen a large field of work would be covered, and so it is in the volume written by Dr. Douglas, for almost every abdominal organ is treated in his book.

With the exception of the suprarenal capsule, the book deals more or less exhaustively with every lesion in the abdomen which a surgeon can be called on to treat, and the work not only demonstrates the careful observations of the author, but its extensive bibliography reveals the pains taken in comparing the work of others with his own.

The author prefaces by remarking that he has refrained from giving operative technique in detail because so many manuals of practical surgery can be found now-a-days, yet one cannot but feel that it is a misfortune that a surgeon of his experience has not given us somewhat more of the practical details of operative treatment. The work almost entirely deals with causation, pathology, symptoms and diagnosis, differential and otherwise, and these are all described most minutely, and leave little room for improvement; yet in a surgical manual one ought to have more practical definitions of the indications for operation and of the operative measures themselves.

In regard to the diseases of the pelvic organs, fibromyoma of the uterus is discussed in an excellent but somewhat brief chapter for such a subject, and we are glad to see such a good description of the changes and degenerations that may take place in these tumours, and

also on the very important question of pregnancy complicating fibromyoma. A very good description is also given of various cystic troubles in the ovary, but the account of broad ligament cysts and diseases of the Fallopian tube scarcely does justice to two such important subjects.

The importance of ectopic gestation, and the light which has been thrown on this subject in recent years, is dealt with in an admirable manner, especially in relation to its pathology, symptoms, and diagnosis.

The book contains some very good tables showing the differential diagnosis between the various abdominal affections; and some of the plates, especially those showing position and distribution of pain, are very explicit and somewhat original.

Appendicitis is a subject to which the author has devoted much space and much detail. To trauma as the exciting cause of an attack he attaches some importance, and no doubt owing to the position of the appendix on the psoas, this may frequently occur during muscular strain, and especially when the cæcum is loaded. Like many other modern writers, he distinguishes several kinds of appendicitis; indeed, according to his classification there are four various kinds with five sub-varieties. As these are all practically merely degrees of appendicitis and not distinct varieties of the inflammation, we think this classification is not only clumsy but misleading. He does not advise immediate operation in every case, but recommends surgical interference if improvement has not taken place in twenty-four hours.

In the chapter on intestinal obstruction the various causes are not fully dealt with, nor does the author mention the almost equal importance of evacuating the bowel as well as relieving the obstruction. We cannot agree with him that it is advisable to delay as much as twenty-four hours while trying to reduce an intussusception by distension, when any waiting leads to greater difficulty

and greater risk in dealing with the bowel, should operation be afterwards found necessary. Peritonitis and the various phenomena associated with it are all very clearly dealt with, and also the question of gonorrhœa as a cause.

The author gives a most valuable and interesting chapter on perforating typhoid ulcer, and deals in a masterly way with gastric and duodenal ulcer, as well as with gall-stones, abscess, and hydatids of the liver.

On the whole, the book is very well written, has a good index, deals very minutely with the question of symptoms, and above all with diagnosis; and this, with an extensive bibliography attached to each chapter, makes it a most valuable work of reference.

PATHOLOGIE UND THERAPIE DER RACHITIS. Von Dr. WILHELM STOELTZNER, I. Assistenten an der Kinder-Poliklinik der Kgl. Charité und Privatdocenten an der Universitaet zu Berlin. Mit drei Tafeln. Royal 8vo, pp. 176. Berlin: S. Karger, 1904. Price 4s.

This extremely well-written and well-arranged monograph commences with a masterly summary of the development of our knowledge of rickets, from the classical work of Glisson in 1650 to the last important treatise by Vierordt in 1896. After a short chapter on its geographical and racial distribution, the author sketches the symptoms as they affect—at first the general system—and in the subsequent course of the disease the bony skeleton, and the viscera and their functions. As regards the time of onset, he holds that the skeleton is not materially affected till some weeks after birth. He estimates that in Berlin upwards of 90 per cent. of all children are more or less rachitic, and though he cannot assert that the disease, in itself, is ever fatal, it is certainly indirectly a very important factor in infant mortality. It is apt, particularly during teething, to be attended by complications, by thoracic, intestinal, or nervous disorders. As regards the pathology of the disease, Stoeltzner differs from Dickinson, and does not admit the existence of a visceral form of rachitis, holding that as yet no patholo-

gical changes analogous to the rachitic derangement of the development of the bones has been demonstrated in other organs, and he ventures to differ from Virchow, and defend the pathological identity of rachitis and osteomalacia, while admitting that they may be due to different causes.

The chapter on the Aetiology and Pathogenesis is the most interesting in the book. Stoeltzner, after a critical review, concludes that the first cause of rickets lies in the functional insufficiency of an organ analogous to the thyroid gland, and probably of the cortical substance of the suprarenal capsules, an opinion in which he is supported by the therapeutical use of the substance of these bodies in a long series of cases.

After discussing the diagnosis, prophylaxis and treatment, including that of children in public institutions, Stoeltzner points out that the diseases of the bones, in the fœtus and new-born, which on superficial examination resemble rickets and have been called fœtal rachitis, may be classed in two groups: (1) Osteogenesis imperfecta (Stilling) or fragilitas ossium (Klebs) or osteoporosis (Kundrat); or (2) the cases of chondrodystrophia fœtalis (Kaufmann) or cretinoid dysplasia (Klebs), cases undoubtedly closely allied to cretinism, and of which in his opinion the most marked cases may be regarded as fœtal myxœdema. A list of literature, which though long does not pretend to be complete, and three microscopical sections, are appended.

An interesting discussion took place at the American Pædiatric Society last year (*Archives of Pædiatrics*, April, 1904), of a paper on rachitis in which Stoeltzner's previous work is recognised.

PUBLICATIONS RECEIVED.

Owing to the length of the Proceedings in this number of the JOURNAL, we are compelled to hold over reviews of several of the following works:—

FROM J. F. BERGMANN, WIESBADEN, BY F. BAUERMEISTER, GLASGOW:

Handbuch der Geburtshuelfe . . . In drei Baenden herausgegeben von F. VON WINCKEL, in Muenchen. Erster Band, II Haelfte, mit zahlreichen Abbildungen im Text und auf 21 Tafeln. Large 8vo, pp. x. and 645. Price 13s. 9d.

- Der normale Situs der Organe im Weiblichen Becken und ihre haeufigsten Entwicklungshemmungen. Auf sagittalen, queren und frontalen Serienschnitten dargestellt von Professor Dr. HUGO SELLHEIM, I. Assistenzarzt an der Frauenklinik der Universitaet Freiburg i. B., mit 40 lithographischen Tafeln und 11 Figuren im Texte. Long quarto, 18 × 13·5 inches. Price £3.
- FROM REBMAN LTD., LONDON :
- A System of Physiologic Therapeutics. A Practical Exposition of the Methods, other than Drug-giving, useful for the Prevention of Disease and in the Treatment of the Sick. Edited by SOLOMON SOLIS COHEN, A.M., M.D. Vol. VII., Mechanotherapy and Physical Education, including Massage and Exercise, by JOHN K. MITCHELL, M.D.; and Physical Education by Muscular Exercises, by LUTHER HALSEY GULICK, M.D. 1904. Eleven volumes. \$27·50.
- FROM BREITKOPF UND HAERTEL, LEIPZIG :
- Die Cystoscopie des Gynaekologen von Dr. WALTER STOECKEL, Oberarzt an der Universitaets-Frauenklinik zu Erlangen. Mit neun farbigen Tafeln und vielen Abbildungen im Text. Demy 8vo, pp. x. and 321. Price 8 M.
- FROM FRANZ DEUTICKE, LEIPZIG AND WIEN :
- Die biologische Bedeutung der Eierstoecke nach Entfernung der Gebaermutter; experimentelle und klinische Studien, von Dr. LUDWIG MANDL, Privatdozent fuer Geburtshuelfe und Gynaekologie an der Universitaet in Wien, und Dr. OSCAR BUERGER, I. Assistent der ersten Universitaets frauenklinik in Wien; mit 6 Abbildungen und 14 Kurven in Text, sowie 13 Tafeln im Anhang. Royal 8vo, pp. iv. and 240. Price 7 marks.
- FROM W. B. SAUNDERS AND CO., PHILADELPHIA, NEW YORK, AND LONDON :
- Atlas and Epitome of Operative Gynaecology, by Dr. OSCAR SCHAEFFER, Privatdozent of Obstetrics and Gynaecology in the University of Heidelberg. Authorised translation from the German, with editorial notes and additions by J. CLARENCE WEBSTER, M.D., F.R.C.P., F.R.S.E., Professor of Obstetrics and Gynaecology in Rush Medical College, &c., &c. With 42 coloured lithographic plates and many text illustrations, some in colours. 1904. Cloth. Price 13s. net.
- TRANSACTIONS OF THE NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY, Fasciculi ii. and iii., 1904.
- FROM THE AUTHORS :
- OVARIOTOMY AND HYSTERECTOMY in Martha Ward, St. Bartholomew's Hospital, by HARRISON CRIPPS, F.R.C.S.
- PRIMARY SARCOMA OF THE VAGINA IN THE ADULT, with the Notes of a Case by HENRY JELLET, M.D., F.R.C.P.I., Gynaecologist to St. Stevens Hospital, and H. C. EARL, M.D., F.R.C.P.I., Pathologist to the Richmond Hospital, Dublin.
- Notes on the Occurrence of GALL-STONES IN INSANE WOMEN; ADVANCES IN PELVIC SURGERY during the past ten years; THE MISCHIEVOUS IN MIDWIFERY; and Acute General Staphylococcic Infection through the Puerperal Breast; by W. P. Manton, M.D., Adjunct Professor of Obstetrics, and Professor of Clinical Gynaecology in the Detroit College of Medicine, &c., &c.
- Lehrbuch der Hebammenkunst, von Dr. BERNHARD SIGMUND SCHULTZE, wirkl. Geheimer Rat, öff. ord. Professor der Geburtshuelfe zu Jena, Mitglied der Medizinalkommission des Grossherzogtums Sachsen. Dreizehnte (13th) Auflage, mit 102 Abbildungen. Leipzig Verlag von Wilhelm Engelmann, 1904.
- The Closure of Laparotomy Wounds as Practised in Germany and Austria, from upwards of fifty reports, edited and translated by Walter H. Swaffield, M.D., F.R.C.S. Edin., &c. 1904.

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THURSDAY, MAY 12, 1904.

PROFESSOR JOHN W. TAYLOR, M.D., F.R.C.S., PRESIDENT,
IN THE CHAIR.

SPECIMENS AND CASES.

The PRESIDENT exhibited :—

- (I) A LOOP OF GANGRENOUS BOWEL SUCCESSFULLY REMOVED FROM A PATIENT WITH STRANGULATED HERNIA; THE HERNIA BEING ONE OF THE CICATRIX AFTER ABDOMINAL HYSTERECTOMY.

My first specimen, gentlemen, is a loop of semi-gangrenous intestine (together with its solid, undigested contents) successfully excised from an old lady, aged 77, who had been suffering for twenty-four hours from a strangulated hernia in the middle line of the abdomen. The hernia was one of the cicatrix after abdominal section and partial hysterectomy for fibroids, performed by one of my old colleagues twenty-three years previously (April 22, 1879).

This original operation was regarded, and most rightly regarded, as one of the most signal triumphs of abdominal surgery at that date. I have assumed in my notice that it

was done by the clamp or "serre nœud," but the old records are imperfect, and the exact method of operation employed appears to be doubtful. In any case, whether by clamp or otherwise, in the course of several years the bowel became very adherent to the scar, and at the lower end of this a large callous opening was to be felt in the abdominal wall, through which a certain amount of bowel frequently protruded. No appliance could apparently be worn with comfort, or even endured, and at the time the strangulation occurred nothing was being worn except a belt bandage. About 4 p.m. on April 4, 1902, the patient was seized with severe abdominal pain and vomiting, which continued all night. On the 5th she was seen by Dr. Clark, who found a very tense, red, hard and glazy swelling (like a coil of distended bowel), projecting from the abdomen across the lower part of the cicatrix. It was quite irreducible. No time was then lost in arranging for the patient's admission to hospital, where I saw her at 4 p.m., and operated. On opening the sac it was seen that the tumour was formed by one loop of bowel bent into the shape of a capital T. It was distended, black, at one part papery and apparently at the point of bursting. It had, too, the faint sour odour of commencing decomposition. After thoroughly freeing the loop, the ends were clamped, the bowel cut through, the mesentery nipped off, its vessels tied, and the loop removed. The cut ends were then joined together by continuous suture without any bobbin or artificial aid. The primary suture was closed in by two other circles of continuous suture. An effort was made to close the hernial opening, but this was found to be impossible. The old circle of cicatricial tissue was quite rigid and unyielding, and an extensive excision of the abdominal wall could alone have resolved this into its separate constituents.

The patient was very ill for two days, but made a perfect recovery, and when she was fully convalescent a rubber air-pad fitted underneath an abdominal truss, gave her relief and safety. I have seen her several times during the last two years, and she continues well and is fairly vigorous.

The specimen of intestine removed, on being opened, was found to contain a large quantity of nodules of undigested meat, which appeared to be the remains of a kidney pie. These seem to be partially responsible for the obstruction and strangulation. At first (in all probability) they were able to enter the loop of bowel, but none could be passed on through the distal end of the loop. Then, as the loop became distended and inflamed, both ends were tightly nipped by the callous margins of the ring, and strangulation became complete.

The case seems to be one of some interest, first, as a successful enterectomy under difficult circumstances; secondly, as illustrating the far-reaching danger to which a patient is exposed after abdominal section, with that imperfect closure of the wound which was so common a feature of the old operation; and thirdly, as an illustration of the method by which an acute strangulation may take place even with a large hernial opening.

(2) BROAD LIGAMENT CYST REMOVED BY VAGINAL ENUCLEATION.

The other two specimens were removed by vaginal section. The first is one of broad ligament cyst removed by vaginal enucleation. For some years I had been rather looking out for a suitable broad ligament cyst to remove *per vaginam*, but it was not until three months ago that I found the case. This was a fixed, tense cystic tumour to the left of the uterus reaching about half-way to the umbilicus above, displacing the uterus to the right, and coming down low enough somewhat to depress the left lateral fornix. The patient was a single woman, aged 51, who had ceased menstruating for several years. On January 12, 1904, I opened the vaginal vault on the left side, extending the incision rather behind the cervix, and readily found the lower limit of the cyst. I tapped the cyst, removing from one and a half to two pints of fluid containing cholesterol crystals, and then finding that I could differentiate the

true cyst wall from its outer coverings, I enucleated the cyst from its bed by my fingers. The chief difficulty was about the higher middle zone of the tumour. When this was passed the upper part of the broad ligament appeared to invert on traction, and the manipulation was rendered easier.

In the course of the operation I made a small opening inadvertently into the peritoneum just anterior to the opening into the broad ligament, so that I could easily verify the peritoneal relations of the envelope. Both cavity and peritoneum were drained with separate drains of iodoform gauze.

The patient did well, but developed a high temperature— 104° , with rapid respiration (40), and quick pulse (128), on the night following the operation. This came down in the course of the following day, and it was a question whether the transient attack may have been due to iodoform poisoning. The patient went home convalescent on January 30.

(3) TUBO-OVARIAN CYST REMOVED BY POSTERIOR VAGINAL CÆLIOTOMY.

The third specimen is a real tubo-ovarian cyst of the left side, removed from a married woman, aged 31, on January 21, 1904, by posterior vaginal cœliotomy. I had removed a smaller tubo-ovarian cyst of the right side some five years previously, from the same patient, by the same method. There were no adhesions. The fluid removed from the cyst was brownish, and rather turbid, as if mixed with some blood or secretion from the tube. The patient was discharged on February 5, 1904.

Dr. HEYWOOD SMITH asked what hindrance there had been to cutting away the cicatricial ring of the hernia and bringing the parts together; would that have involved the sacrifice of too much of the abdominal wall?

Dr. MACNAUGHTON-JONES said that the important point in regard to the President's second case was that of diagnosis. If we were certain beforehand that we had to deal with a simple cyst of the broad ligament, we might no doubt, by attacking it by the vagina, avoid an abdominal cœliotomy, and that would be an obvious advantage ; but should there be adhesions or other complications above the broad ligament, there might be great difficulty in operating by the vagina, just as there was in the vaginal removal of some forms of ovarian cyst. He had seen Schauta remove by the vagina an ovarian cyst of considerable size, but he had known most experienced operators meet with complications that they had not detected in making their diagnosis, and who were compelled to abandon the vaginal for the abdominal route. The diagnosis was much harder in the instance of a broad ligament cyst, and, bearing in mind the risks of unknown complications and the many points that made the diagnosis obscure, he, personally, would prefer to attack a broad ligament cyst by the abdominal route.

The PRESIDENT, in answer to Dr. Heywood Smith, said that there were two reasons for not doing more than he did in the case of hernia : First, the condition of the patient, with a gangrenous bowel strangulated for four-and-twenty hours, was necessarily most critical ; indeed, it was a question whether there was time to do the excision of the bowel while she was alive ; secondly, the induration and thickening of the scar tissue after the first operation was so marked and so extended (as it often was in such cases), that it would have been necessary to excise some inch or more on both sides of the original wound in order to distinguish the various constituents of the abdominal wall, and there would not have been enough tissue left to close the abdomen afterwards. He did not think, after the lapse of so many years, there was any possibility of restoring the condition as it was at first, unless the abdomen had been so lax that a considerable amount of the wall

could have been sacrificed. With regard to the broad ligament cyst, and Dr. Macnaughton-Jones's remarks on its removal by the vagina, he might say that the operator could very easily recognise any complications not detected beforehand through the vaginal roof, and could, if necessary, alter his route to the abdominal one; moreover, in nearly every case in which there were such complications, the opening of the vaginal vault would be of help, for the vaginal drain would be of service. No simple uncomplicated case treated by abdominal section required drainage, but if the route had to be altered from the vaginal to the abdominal one, the operator would probably be glad of the vaginal drain.

DISCUSSION ON THE APPLICATION OF PESSARIES, AND THEIR DANGERS.

Dr. MACNAUGHTON-JONES, before the opening of the discussion upon his paper (see *ante*, p. 97), illustrated the method of shaping the supports suitable for individual cases, by moulding several pessaries from the semi-transparent celluloid rings recommended by Schultze, which he pointed out were not only the lightest and strongest made, but never after application altered in form from the shape so given them.

Dr. HEYWOOD SMITH thought that as regarded the dangers of pessaries the great pitfall open to practitioners was the mistaken idea that the application of a pessary in a case of retroversion, was sufficient to cure the displacement; indeed, it was not unusual to meet with cases of backward displacement in which pessaries had been inserted without any previous attempt to place the uterus in its proper position. All that a pessary could do was to support the uterus during the process of cure, which sometimes took eighteen months or two years, during which time the patient had to be kept fairly quiet so that no relapse should occur. The Hodge pessary and its modifications were the instruments most used in this country. The

Smith-Hodge, when first brought out, though almost flat, had a slight curve at each end. Unknown to each other, Dr. Albert Smith, of Philadelphia, and he himself, had devised the curve, which Dr. Macnaughton-Jones, in a slightly exaggerated shape, called his S-shape. There were cases in which the uterus could not be kept in position by the Smith-Hodge pessary unless the vaginal wall, especially the upper portion of it, was put upon the stretch; if the pessary were too short, on the least strain or exertion by the patient the uterus would bend over the upper arm of the instrument into an increased retroflexion, and there would be irritation and congestion at the seat of the bend. When there was congestion and endometritis, it was often best to put the patient to bed, bleed the uterus, and apply tampons and use hot douches until the uterus would bear reposition and the support of a pessary. Dr. Macnaughton-Jones seemed to imply that bimanual replacement had altogether superseded reposition by the sound; in that he could not concur, but considered that when the uterus had become fairly insensitive and the sound could be passed without causing any discomfort, reposition by the sound was a great advantage, as by it the fundus could be brought on to the pubes and the uterus placed in a position of exaggerated anteversion, from which it was less likely to fall back into retroversion. Every woman wearing a pessary should be kept under observation to make sure that the instrument kept its place. The patient should not be encouraged to remove and replace it herself; no doubt, if carefully instructed, she might take out and replace a ring, but a Smith-Hodge was a different matter; even medical men sometimes put them in wrongly. Moreover, if the uterus had fallen back, the patient could not replace it, and the introduction of a pessary below a displaced uterus was worse than useless. For antelexion he was sure that no pessary outside the uterus was of any benefit; some form of intra-uterine stem must be employed. The patient should be prepared by a week or two in bed, the cervical canal

incised slightly and forcibly dilated, and a stem, preferably of glass with a large button, slipped in. The stem should be neither too long nor too short, and should be retained in the position by rest in bed till after the next period was passed. He disapproved of any string being attached to the stem, as, when soiled by discharges, it would form a likely source of septic trouble. For prolapse, an elastic ring was the best support, and, if sufficiently large, would often obviate the necessity for a serious operation.

Dr. C. H. F. ROUTH had no doubt that the ingenious method described by Dr. Macnaughton-Jones would be very useful in many cases, but there was an objection in the fact that celluloid was a very inflammable substance and dangerous to be handled by servants. He exhibited several specimens of the pessary he preferred himself—a Hodge pessary, which he had supplemented with a ring carrying a hollow stem, the ring being on an axis, which allowed it to play for the movements of the uterus, but the instrument could not fall out. His plan was to reduce the congestion by bleeding, by puncture, or even by leeches, and to introduce a sea-tangle tent adapted to the curve of the uterus and swathed in cotton wool dipped in pure carbolic acid. This caused some bleeding for a few days, and when he found that the inflammation had passed away and the size of the uterus had diminished, he applied the instrument and generally left it *in situ* for six months. He had never had any evil results from this method, which had with him been very successful, and especially so in curing sterility. Seven women out of eight from one town, who had been previously sterile, conceived after being so treated.

Dr. HERBERT SNOW said that some objection might be taken to the title of the paper for which perhaps Dr. Macnaughton-Jones was not altogether responsible, as it seemed to be rather a laudation of pessaries than otherwise. He did not think that the mischief arising from pessaries improperly introduced, owing to a wrong diagnosis, should

be attributed to the pessaries, but of course the dangers attending their use were real. As a student he had seen a large ring shaped like a cart-wheel, with two ridges on its circumference, dug out of a woman's vagina, where it had lain nearly a dozen years, and caused ulceration before and behind. He thought that the forms of pessaries used were unnecessarily numerous and complicated. They were, he thought, used for three purposes: first for the relief of pain; a ring pessary would relieve the pain of a prolapsed ovary certainly for a time; it kept the vagina taut and gave the needful support to the relaxed muscular walls. It no doubt had often some effect by hypnotic suggestion, though it was not desirable to dwell too much on that. The second purpose was to retain in their place organs which otherwise would prolapse, and he was glad to hear Dr. Heywood Smith favour the treatment of uterine prolapse by the same instrument—an elastic ring. Thirdly, a pessary was used to rectify the position of a retroflexed or retroverted uterus. Happily, anteversion was not now, as in his student days, looked upon as a pathological condition. Personally, he thought that no pessary should ever be employed for the rectification of a flexion, seeing that the pain and other ill-symptoms almost wholly resulted from internal adhesions which could not be dealt with instrumentally. No harm attended an ordinary flexion or version when the uterus was mobile, and in the absence of previous perimetritis. Moreover, the natural movements of the organ with the varying distension of bladder and rectum, in addition, the frequently short intravaginal cervix, commonly precluded rectification by the best intentioned pessary. He thought the simple elastic ring, while perfectly innocuous, effected every benefit possible, and that the true principle for pessaries in general should be that of support to the relaxed vaginal wall and pendulous pelvic viscera, but nothing more.

Dr. R. H. HODGSON said that in an experience of twenty years he had never met with an instance in which

the introduction of a suitable pessary, or stem, in a suitable case had been followed by serious consequences. Of course, before any pessary was introduced, the congestion which had probably contributed to the displacement should be relieved. A neglected pessary might cause mischief; he had known many instruments retained for long periods, the worst case being one in which an instrument inserted by an eminent surgeon in Paris had been left in for several years and had caused a vesico-vaginal fistula. There was some contradiction in the paper in regard to the "stretching" of the vaginal walls. It was no doubt indispensable that the pessary should keep the walls of the vagina taut, and the omission of the word "stretch" would probably put the description right for both classes of cases. He did not see how even an S pessary properly introduced could press against the fundus uteri. It would only be in a very extreme backward displacement that the fundus uteri could come in contact with the floor of Douglas' pouch, and if, as was to be presumed, the normal position of the uterus had been restored before the pessary was inserted, the pessary would not even press against the body of the uterus. The action of an S pessary is to raise the vault of the posterior cul-de-sac and thereby draw backwards the cervix, to raise the floor of Douglas' pouch, and thus, by lessening the curve therein, to lengthen the antero-posterior diameter of that pouch, whereby the back traction on the fundus is lessened, to push back by means of the convex surface of the upper end of the pessary the posterior vaginal wall and correspondingly draw backwards the anterior wall; and as the lower end of the anterior wall is prevented from rising by the lower end of the pessary, the drawing backwards of the upper end of the anterior wall of the vagina draws down the anterior vault and with it the anterior surface of the uterus, the lessening of the backward tension of Douglas' pouch and the drawing downwards of the anterior cul-de-sac being in his opinion the chief factors which enable an S pessary to retain the uterus in its

normal position. Therefore it follows that an ill-fitting pessary, or a pessary in an abnormally relaxed vagina, fails to give the relief sought. He was sorry to hear the use of stems denounced, because, while he had never seen any harm from them, he had in a number of cases known them relieve pain that had been of years' duration.

Dr. J. A. MANSELL MOULLIN agreed with much that had been said by Dr. Heywood Smith and by Dr. Hodgson, but did not think they had been quite correct about the exact action of the pessary. The first effect of the instrument was as described in the paper. In almost every case of retroflexion or retroversion there was more or less sinking of the vagina, and the first action of the Hodge was to elongate and restore the vagina to its normal shape, but not to stretch it or even make it taut. The second action was merely mechanical. If the posterior vaginal vault was deep enough for the pessary to rise well behind the uterus the fundus could not fall backwards. A tampon of cotton wool would act in the same way. He thought that the effect of the pessary as a lever had been greatly exaggerated; the idea of respiration acting first on one and then on the other end of the pessary was very far-fetched.

Mr. STANMORE BISHOP said he was disappointed not to see more general practitioners present, for he thought that they saw more of the evil results of pessaries, and were certainly more tempted to use them than hospital surgeons. He entirely believed in the lever action of pessaries, but thought that as regarded their use a distinction should be drawn between flexion, version and prolapse. A flexion was often due to softening of the uterus from endometritis, and associated with inflammation of the adnexa, and he thought that pessaries in such cases could do very little good and were likely to do much harm. Yet it was in flexions that the practitioner seemed most inclined to apply a pessary and omit to impress on the patient the necessity of medical control. Version presupposed a firm body, against which a lever could act with

effect. He was glad to find that anteversion, as a pathological condition, was practically ignored, and thought it should be known that the British Gynaecological Society condemned the use of pessaries in young women supposed to be suffering from anteversion, but whose trouble was either hysterical or due to some totally different cause. He had the strongest objection to the use of a pessary merely as a means of hypnotic suggestion. He had seen much evil result from the use of pessaries in young unmarried women for supposed pathological anteversion. As regarded anteflexion, if its effects were so serious as graphically described by Dr. Routh, should the operations of Duehrssen and Mackenrodt be countenanced for any displacement of the uterus? The most difficult cases of prolapse were in women who would not submit to operation, and if one put in a ring big enough to retain the uterus, the woman probably failed to report herself till the instrument was coated with foul deposit.

These rings acted by still further distending the already over-dilated vagina, and he had seen uteri descend through them. In these cases pessaries of any kind were useless, and operation was the only reasonable resource. Since advocating his own operation before the Society in December, 1902, which aimed at reproducing the sacro-uterine attachments, he had operated on several others, in all with good results. He thought age was no bar to operation since one of the later cases was that of a woman aged 61 years.

The PRESIDENT, speaking of the difficulties of diagnosis referred to by Dr. Macnaughton-Jones, admitted that such difficulties were met with, but said they should maintain a high ideal, and it would ill become the Society to admit that these difficulties were at all insurmountable save in the most exceptional cases. He had little doubt that it was some negligence, some want of observation of symptoms as well as physical signs, which was mainly responsible for the mistakes. He was sorry that more had not been said

as to the real dangers of pessaries and their continued use, which in his opinion were twofold. In the first place, after a pessary had been worn for some time pelvic disease was apt to develop, either from the rekindling of an old inflammation, possibly the original cause of the displacement, or from the onset of some new infection. In the latter instance the pessary itself might be the means of infection from without; in other cases its presence had undoubtedly disturbed normal marital relations and suggested to the husband some excuse for occasional unfaithfulness. A pessary might be worn for years, by one who was past the change of life, without any harm resulting, but in young women the use of a pessary was apt to lead to some form of infection. The second danger he would mention was from stretching. He held with Dr. Heywood Smith that a pessary, to be of use in retroversion, must elevate the vaginal vault behind the cervix, and by doing so, it hangs up the cervix, like the prop does a clothes-line, and the fundus falls forwards. As a temporary measure that is very useful, but by stretching the sacro-uterine ligaments it does exactly the wrong thing. In his own opinion pessaries might be applied in middle life in order to ascertain whether the symptoms complained of were due to displacement of the uterus or not. If they were found to be so, the case was one for operation. Many years ago, when Schultze's book was first published, he had procured celluloid rings from abroad and made pessaries in the way described by Dr. Macnaughton-Jones. He had used them extensively, but had not found them satisfactory. The figure of 8, especially, seemed to cause much trouble with the rectum, and, like Dr. Macnaughton-Jones, he had reason to prefer the Smith-Hodge or the "S" pessary. Moreover, though he got his rings from abroad, he found that after lying for four or five weeks in the vagina, they altered considerably in shape. The celluloid now supplied might possibly be better. He had found that for prolapse in oldish women the best pessary for keeping up the uterus was Tait's modification

of Simpson's shelf pessary, which had all the advantages, without the demerits, of Zwanke's.

Dr. MACNAUGHTON-JONES, having thanked the Fellows for the way in which they had received his paper, said, in reply, that the dangers arising from pessaries might be either of a positive or negative nature. The former he had not dwelt on much, because they were obvious to everyone, but rather on the latter. His contention was that pessaries were often applied under conditions in which not only were they useless and possibly mischievous in themselves, but were dangerous, because they encouraged an expectant treatment of inflammatory states which might be arrested and cured by operative measures, the woman's mind being, as had been suggested, "hypnotised" into the belief that in some measure her affection was being cured and her sufferings mitigated, by the insertion of a pessary. Serious pelvic complications thus increased in severity, endangering the woman's life and increasing her risk from the final operative interference. As to the term "letter S," which Dr. Heywood Smith had referred to, much ingenuity could not be claimed for simply altering the shape and curve of the original Smith-Hodge. It decidedly was not well, in the case of certain pessaries, such as Fowler's or Galabin's, to leave it to the patient to remove or replace them, especially the latter, nor could she replace the modification of the hoop pessary he had moulded. Those to which he was referring were such as the ordinary glycerine ring, or the Smith-Hodge. There were many circumstances under which patients might find themselves when any pessary ought to be removed, and under these conditions they should at least be able to withdraw it, and they should be taught how to do this. William Goodell was one of the most practical and discreet American gynaecologists of his day, and he (Dr. Macnaughton-Jones) had purposely taken his amplification of Hodge's view of the action of his pessary, and had quoted this as he believed it to be complete and correct. The opinion of Matthews Duncan

in England, of Gaillard Thomas and Marion Sims in America, as to the dangers which accrued from the misuse of a pessary, was expressed in much stronger language than that used by him. All he had to say of stem pessaries was, that he did not use them, save, as he stated, only occasionally and under exceptional circumstances, and then only as a post-operative aid in maintaining dilatation after division of the uterine canal. They were worn but for a very short time. The celluloid stem was safe and clean, and the string of silk or non-absorbable cotton (*Celloidinzwirn*) attached for withdrawal, if necessary, did no harm. As to the action of the Smith-Hodge or its modification, which he had depicted as the "S" pessary, he totally differed from the opinions which had been expressed as to its mode of action. He still looked on it as a lever when properly applied, as explained by Goodell, and this view was also that of Schultze. The celluloid cushion was an admirable pessary, easily kept aseptic, and worn after the uterus had been retained in proper position for some time, but where there was a tendency again to retrovert. Robert Barnes it was who first adopted the rubber cushion of air or glycerine. Braxton Hicks also used a pessary with a celluloid cushion. He (Dr. Macnaughton-Jones) repeated that Galabin's anteversion pessary was one of the most valuable of all means of relieving certain symptoms due to exaggerated and abnormal anteversion or anteflexion of the uterus. It was, as he had shown in the diagrams, of special service in an anteflexed uterus, or one in which there was a myoma in the anterior wall, also in cases of cystocele. It could be closely imitated, as he had shown, by the moulding of a Schultze's or wire celluloid ring. He did not agree with what had been said as to the softness of the uterus in flexions, and how far we should be influenced by this in the application of a pessary, for in an old flexion there was frequently a greater degree of hardening than in the simple retroversion. As to prolapse, he felt strongly that pessaries should only be used in the earliest stages, and

never advised when the descent became more apparent, unless the patient absolutely refused operation. The very class in which prolapse most frequently occurred was that in which operative measures were most demanded in order to enable the sufferer to earn her bread. If we urged operations of different kinds in other forms of displacement, it was equally, if not more important that the woman who suffered from prolapse should be made aware of the probable if not inevitable misery before her should she decline operation, and urged not to postpone it until far graver and more serious procedures would have to be carried out. With regard to ideal diagnosis, while this was doubtless always to be aimed at, it was frequently not attained, and several of the conditions mistaken for retro-displacements were difficult to differentiate, and not possible without an anæsthetic. As he had stated, he had seen every complication he had mentioned or depicted, where a pessary had been worn up to the time of an operation, during the performance of which the actual nature of the condition present was for the first time disclosed.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, JUNE 9, 1904.

PROFESSOR JOHN W. TAYLOR, M.D., F.R.C.S., PRESIDENT, IN THE
CHAIR.

GIANT MYOMATA.

MR. CHARLES RYALL, in the absence of Mr. Bowreman Jessett, exhibited an enormous soft myoma undergoing calcareous degeneration. The patient was past the menopause, but as the tumour was continuing to grow Mr. Jessett decided to remove it, though an attempt to do so in one of the London general hospitals had been abandoned. The tumour was adherent for at least three inches on each side of the middle line from the pubes to above the umbilicus, the capsule being intimately blended with the parietal peritoneum. The patient suffered from considerable shock, for which she received intravenous transfusion, and saline solution was also left in the abdominal cavity. Otherwise she bore the operation well. The tumour weighed about 26 lbs.

Dr. MACNAUGHTON-JONES said giant myomata were not always more difficult to remove than small tumours. Four years ago he had removed one weighing 28·5 lbs., which, besides its attachment to the uterus, had a large pedicle to the broad ligament, and was also adherent to the bladder. The bladder was opened during the operation, but immediately stitched up, and the patient did well, and is now in perfect health.

Dr. C. H. F. ROUTH mentioned that he had successfully removed a tumour weighing 22·5 lbs.

The PRESIDENT asked whether the pelvis was free, or

whether any portion of the tumour, which was interesting not only from its size but from its situation, had to be enucleated from the pelvic cavity.

Mr. RYALL replied that the tumour was not at all adherent to the pelvis.

THE DOWNES ELECTRO-THERMIC ANGIOTRIPE. BY H. MACNAUGHTON-JONES, M.D.Q.U.I., M.A.O.R.U.I. (Hon. Causa), F.R.C.S.Irel. and Edin.

I show these appliances for Dr. Andrew Downes of Philadelphia, and you will agree with me that they are as skilfully devised and as beautifully constructed instruments as one can well conceive. It will be remembered that so far back as 1862 Baker Brown used the cautery in the treatment of ovarian pedicles. Keith also adopted this method, and so did Lawson Tait. Byrne adopted the galvanocautery with considerable success for operations on the uterus, especially in malignant conditions. To Skene of Brooklyn, however, is due the credit of introducing the practice of electro-hæmostasis—that is, the control of hæmorrhage by the combination of forcipressure with heat produced by electricity.¹ Jacobs of Brussels in 1899 advocated it instead of ligature, clamp, or forcipressure by lever, the advantages claimed being that there is no sloughing of the tissues, that it enables us to act on a large surface, occluding the lymphatics, and opposing an obstacle to the spread of infection. Also, no bleeding surface is exposed which is calculated to form adhesions with surrounding structures. Again, where tissues are friable and the application of a ligature is risky, the application of hæmostasis is safe. Jacobs used various hæmostatic clamp forceps and indicated their use in cases of ovarian cystoma and panhysterectomy, as well as in appendicectomy and resection

¹ *Revue de Gynécologie*, July—August, 1889.

of the omentum.¹ He had then (August, 1899) performed six abdominal hysterectomies and two ovariectomies, besides other operations without an accident, and Skene had carried out over 200 cœliotomies without any hæmorrhage. The strength of the current was regulated by the interposition of a galvanometer, the time necessary for the desiccation being from half a minute to two minutes.

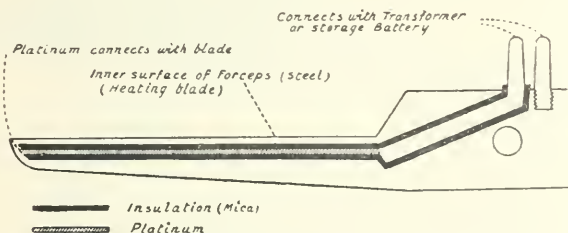


FIG. 1.—Section of the heating blade.

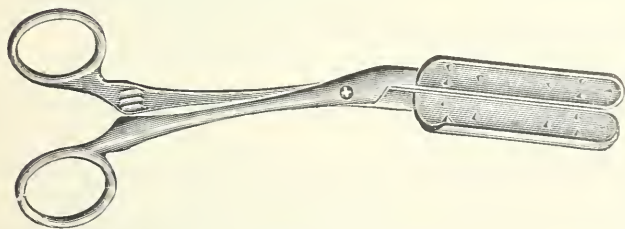


FIG. 2.—Protecting shield.

The main improvements aimed at by Dr. Downes were the ability to raise the heating point to 212° F., the insuring of cool shafts and handles to the instrument, greater security in the construction of the blades for the resistance of heat, and increase in the degree of pressure exerted.² The outfit consists of three angiotribes with blades of different widths,

¹ Macnaughton-Jones, "Diseases of Women and Uterine Therapeutics," Eighth Edition, 1900.

² *American Medicine*, May 24 and November 28, 1903; also *American Gynecology*, July, 1903.

a quarter, three-eighths, and half an inch, one of the angiotribs being curved; a shield to protect the surrounding parts, a cautery knife, cable, transformer for use with the continuous or the alternating current, and the necessary electric supply. A maximum current of 60 ampères is

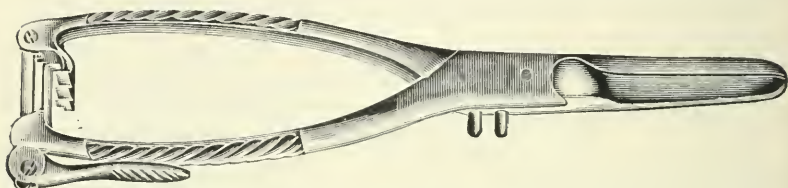


FIG. 3A.—Lever electro-hæmostatic angiotribe with straight blades. The blades open on releasing the lever.

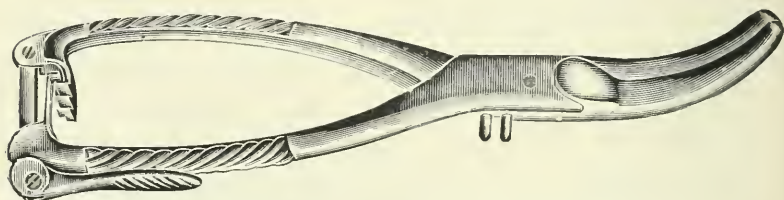


FIG. 3B.—Lever electro-hæmostatic angiotribe with curved blades.

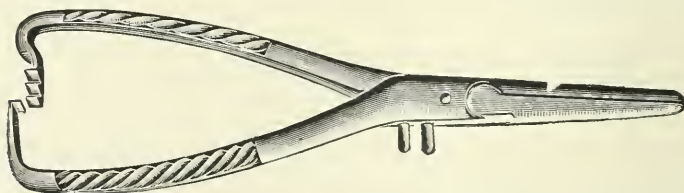


FIG. 3C.—Electro-hæmostatic forceps without lever.

necessary, and the platinum in all the instruments should be of the same weight. The advantage of this high ampèreage is that the heat developed in the platinum causes the blades to heat more rapidly and effectually than with the lesser current, while there is less risk of burning out the platinum. The cable used is composed of mineral and

rubber and will stand indefinite boiling, while it can be made in two portions, so that the coupler alone need be sterilised for each operation.

Fig. 1 shows the section of the heating blade, the inner surface being made of steel, inside which are the layers of mica insulating the platinum. It also shows the connections with the transformer of a storage battery. Fig. 2 illustrates the protecting shield. Fig. 3A shows the lever angiotribe

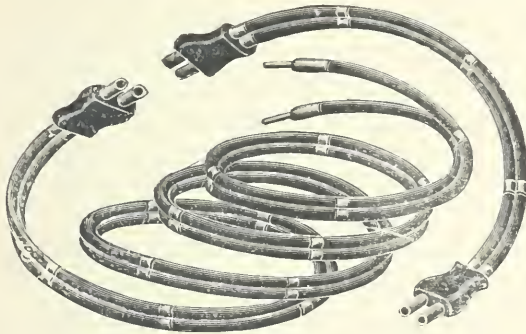


FIG. 4.—The cable and coupler.



FIG. 5.—Thermo-cautery knife.

closed, and fig. 3B the same with curved blades. On releasing the lever the handles spring open. On reclosure, when the lever is adjusted, greater pressure is exerted on the blades. Fig. 3C shows the angiotribe without the lever. It is less powerful in its forcipressure action than that with the lever. Fig. 4 shows the cable and coupler. Dr. Downes has devised a foot breaker for the control of the current, so that it may be turned on when required by pressure of the foot. All that is necessary to heat the instruments is gradually to turn on the rheostat of the transformer until the

platinum in the cautery knife (fig. 5) or in the heater is a bright red. The transformer may be set at this point in the operating room, thus securing the necessary electrical supply by pressure of the foot at the required time. Water placed on the pressing surface of the blades will boil in ten, fifteen or twenty seconds, according to the width of the blades already mentioned. From ten to thirty seconds longer must be allowed after the application of the instrument for the hæmostasis.

In the latest reprint of his pamphlet on the subject, Dr. Downes enters into details of the various operations—such as ovariectomy, salpingo-öophorectomy, herniotomy, appendicectomy, and various intestinal operations, as well as those on the stomach—which may be performed by this method. He also describes the particulars of operations of hysterectomy, abdominal and vaginal. He has collected the particulars of 80 hysterectomies, 200 salpingo-öophorectomies, 1 nephrectomy, 200 appendicectomies, and 20 ovariectomies for ovarian cysts, 16 of the hysterectomies being for cancer. Amongst those who have specially written on this method of hæmostasis are Hirst and Charles Noble of Philadelphia, Bovée of Washington, and Goldspohn and Murphy of Chicago.

I have no experience myself of this method, as I have never adopted it, but the results reported by a number of operators who have used these appliances prove that it is one which can be followed with perfect safety. "Intestinal resection and anastomosis," says Dr. Downes, "by these instruments can be ideal." He has yet to hear of hæmorrhage after an operation in which these instruments have been used. At the time of writing (November, 1903) the only accident that he was aware of was the clamping of the right ureter in hysterectomy for cancer in an operation in which he himself assisted. He has operated upon moribund cases, and during sixteen months he had but one death in any case in which his appliances were used, and that was not connected with the method of operation.

Messrs. Arnold and Sons have the appliances.

ON THE PREVENTION OF VENTRAL HERNIA AS A SEQUEL
TO ABDOMINAL SECTION. By E. STANMORE BISHOP,
F.R.C.S.Eng.

GENTLEMEN,—Although it is fortunately true that in the great majority of instances no hernia follows abdominal section, and that every variety of incision and method of closure can count its successful results by hundreds, yet it is equally true that post-operative ventral hernia does occur at times in a small percentage of cases, and one of the greatest disappointments that can fall to the lot of any abdominal surgeon is to find that after a successful operation upon some of the internal structures, the outer wall of the abdomen, which had apparently perfectly united, yields soon after the subject gets about again, or during the next few years, and his patient returns later with a large ventral hernia. The discomforts arising from this discount heavily the advantages obtained from his work, and unless the primary operation was performed for something which was evidently risking the life of the sufferer, or making that life unbearable, she is apt to consider that the last stage is infinitely worse than the first, and to wish that she had never consulted a surgeon at all. Such an occurrence does much to mar the reputation not only of the operator but of the operation itself, and to dissuade others whose condition requires it from having recourse to the benefits it is otherwise able to confer.

It is difficult to get any clear idea of the relation between successful and unsuccessful cases of union of the abdominal wall. Unsuccessful cases, as Owen says, are apt to be quietly interred, and one hears nothing of them. But my friend, Mr. Rutherford Morison, estimates the number occurring in his own very large practice at about 2 per cent., and in my own list of over 350 abdominal sections I can find 4, a little over 1 per cent. Every abdominal surgeon will, I think, admit that he sees them from time to time. Allow me to mention briefly the details of these cases.

CASE 1.—Mrs. H., aged 29, who in 1892 was operated upon in another town by another surgeon, who removed an ovarian cyst. As soon as she began to get strong she suffered from a hard dry cough, which persisted for a long time. This continued, according to her account, more or less for over two years. No yielding of the scar was noticed until the middle of 1895, about three years and a half after the first operation. This went on slowly for six months, when she presented herself at Ancoats Hospital. At that time—January, 1896—there was yielding of the lower two-thirds of the scar; there were present two or three openings in the fascia through which the internal contents, consisting chiefly of omentum, could be felt protruding beneath the skin, one slightly to the left and about midway between the pubes and umbilicus being larger than the rest.

On January 23 the skin was divided by a straight incision parallel to and to the right of the old scar. The patient took the anæsthetic very badly, and the operation was therefore hurried. After freeing and removing the omentum the fascial edges were approximated by buried silkworm-gut sutures, the skin by horsehair. There was continuous vomiting for four days, nevertheless firm union apparently resulted, and the patient was discharged on February 8, that is, in sixteen days after the operation. She was firmly strapped up.

In March, 1897, that is, fifteen months later, she presented herself again. She said that in the previous June, whilst travelling by train, she was assaulted by some man, and as soon as the train stopped she jumped out of the carriage. In doing so she fell on her knee, and was aware of some yielding of the abdominal wall, which had since increased. She was found to have two medium-sized herniæ, rather outside the median line, one above the other, the highest being about one inch from the umbilicus. This time she took the anæsthetic better, and both sacs were carefully dissected free from the edges of the openings, and removed with some extruded omentum. The fascial edges were split, after Grieg Smith's method in umbilical herniæ, so as to obtain a wider union, and united by buried silkworm-gut. She was discharged on March 24, three weeks after operation, apparently firm. She was again firmly strapped up.

Once more she returned in 1899. This time no apparent reason had existed for the reappearance of the hernia, but

again three distinct spaces were to be felt, each more or less in the line of the scar, and each containing omentum. This time frayed-out bands of fascia were found in the coverings of the herniæ, partially subdividing them. The whole scar was excised and all the spaces thrown into one. The fascia was very carefully bared above on one side, and below on the other, for a distance of 2 to 3 cm. on either side. Mattress silkworm-gut sutures were placed in such a way as to draw one layer of fascia over the other and to fix it there. These sutures were buried and the skin united over all. She was kept on her back for two months. Twelve months later the union was still firm and secure, and as nothing further has been heard of her, it may be supposed that the hernia has not again recurred. Five years have now elapsed.

CASE 2.—Mrs. B., aged 31, a heavy, phlegmatic woman, with great development of fat, enteroptosis, and prolapsus uteri, was operated on for ventrofixation on May 22, 1900, apparently successfully, and she was discharged well on June 15, three weeks after operation.

The next year, February 7, 1901, she appeared with a large median ventral hernia, which I have operated upon three times since, always without lasting success, and she has now a large hernia, which can only be supported by a heavy belt.

CASE 3.—Mrs. K. H., aged 33, in July, 1893, had a parovarian cyst removed, and as was the custom at that time, a Keith's drainage tube was inserted into Douglas's pouch. The peritoneum was united around this with catgut, and the skin and muscles, including the fascia, by through-and-through sutures of silkworm-gut. The tube was removed on the third day, and a small amount of omentum plugged the opening. She recovered apparently completely, and left the hospital with the wall firm two months after operation.

Four years later she returned with two small gaps in the line of incision. Omentum was found adherent to their edges and was freed all around. The edges of the fascia were brought together and united by buried silkworm-gut sutures. Two days later, there having been almost persistent vomiting, the abdominal wall gave way, and a loop of intestine could be seen below and between the skin sutures, which were cutting into it. The loop was washed and returned, and the muscular wall reunited by silkworm-

gut sutures which passed through them, the fascia and the peritoneum; the skin and subcutaneous layer was left open, to permit of free exit to any discharges. Healthy granulations being present seven days later, the outer layers were drawn firmly together by strapping. She left the hospital one month after the operation apparently soundly healed, and was seen a month later still, when she was perfectly firm. This was in 1897.

Once more she returned in 1903, that is, six years after the last operation, and ten years after the first. This time there was a large ventral hernia, extending over very nearly the whole extent of the scar. She could give no very definite reason for its reappearance, but said that it had gradually opened up, and had been present for at least a year—it might be more. She was never very clear in her statements. This time the operation took a long time. Adhesions were plentiful and firm, omentum and large intestine were adherent to the edges of the opening, especially near its upper end, and the latter had to be separated with much care. The outlying cavities of peritoneum seemed never ending; when one was cleared out, a small tag of omentum led into another, which in its turn had to be opened up; and when at last the whole tangle was straightened out and the muscular wall properly united, the patient was much collapsed. Transfusion was done on the table during the operation, 20 minims of liq. strychn. and 10 minims of adrenalin were injected subcutaneously; but the length of exposure and the severity of the operation itself were too much for her, and she died within twenty-four hours.

CASE 4.—H. F., aged 47. A large fibroid uterus was removed by the abdominal route on November 23, 1897. The fascia was united by buried silkworm-gut mattress sutures. Suppuration occurred around one of these, and a sinus formed. From this, on the 31st, the suture was removed and the sinus healed. She was discharged on January 15, 1898, seven weeks after the operation. She remained perfectly well until 1902, that is, for four years. She was then nursing a sister; the scar began gradually to yield, and a hernia appeared. This slowly increased, and on her return to hospital in May, 1904, there was a circular opening in the fascia about two inches in diameter; through this bowel and omentum had escaped, and formed two bluntly acuminate masses, separated by the firm, thick, skin scar,

which stretched like a tough cord above and between them. On operation omentum was found firmly adherent to the edges of the opening, and spreading widely in peritoneum-lined cavities above the fascia in the subcutaneous tissues.

It is too early to say anything as to the result in this case, but of the three others it will be seen that one was apparently cured, one is still uncured, and one ended in death. Such occurrences makes one, as the French say, furiously to think.

Many abdominal operations are not of a simple kind. A firmly adherent double pyosalpinx cannot be removed safely in a few minutes, whatever the advocates of extreme speed may say. When small and large intestine are adherent above and behind, when adherent omentum covers in the whole mass, when the tubes themselves are tense and thin, separation must, if it is to be safe, also be quietly, slowly, patiently carried out, and such patient work takes time. An intraligamentous fibroid cannot be enucleated with safety at express speed. It is therefore inevitable that when all the primary and essential work is done, the patient will be feeling the shock of the operation, and that the surgeon, possibly urged thereto also by remarks from the anæsthetist, will take the readiest means possible of closing the abdominal wall, and risk the possibility of this not being the one most likely to ensure a satisfactory and permanent union.

So forcibly had this impressed some surgical minds that some years ago there was a strong current in favour of doing all pelvic operations in women by the vaginal route. Incisions in the upper half of the abdominal wall are by no means so likely to be followed by hernia as are those in the lower half. Very rarely indeed are operations upon the gall bladder or stomach succeeded by ventral hernia, and of course this might have been anticipated. The main weight of the abdominal viscera rests upon the lower half of the abdomen; the structures found there—the small intestinal loops—are more movable, and are more likely to undergo

variations in size owing to distension, than those found in the upper half, and therefore the internal tension upon this segment alters more rapidly, more frequently, and more forcibly. In the lower segment, moreover, is found the free extremity of the omental curtain, and experience has shown that this structure has a most perverse tendency to insinuate itself into any opening which may have been left, and that when once it has gained an entrance it gradually but persistently tends to widen this, pushing the peritoneum before it, and to burrow amongst and between the superjacent structures. Any one who has operated upon a few ventral herniæ knows how far more extended they are in the subcutaneous fat than was apparent before the skin was divided; that outside the apparently rounded and defined limits of the protrusion as felt through the skin, will be found small loculi of peritoneum, each occupied by its own little omentum tag, evidently the outposts and pioneers of the ever-invading structures of which they are the extremities. When once this process has gained any ground, nothing appears to stand before it. Peritoneum is expanded, fat is absorbed, muscular fibres pushed aside, even the resistant fascia will be found frayed out over the mass, or with some few more obstinate bands stretched tautly between adjoining lobes. If, then, internal pelvic viscera could be reached and dealt with from the vagina, leaving the abdominal wall intact, much after-misery would be avoided. And, greatly to the satisfaction of workers in this direction, many other advantages have been proved to be gained in surgical work by this route. Shock is very materially lessened, after-recovery is more rapid, peritonitis is evidently not so great a danger, and many more operations turn out to be practicable through this canal than *à priori* would have appeared possible. But some things still remain, in treating which it is most convenient and safest to adopt the abdominal route. Ovarian cysts, even if multilocular, may be evacuated and removed through the vagina; but when these are adherent, and no pre-operative signs exist

by which the extent of these adhesions can be estimated, it is wiser to attack them from above. Some adhesions, such as those to the lower end of the omentum, can be detached from below, but adhesions to the transverse colon, to the outer borders of the broad ligaments, to the sigmoid flexure, &c., are almost impracticable without a free entry through the abdominal wall. Ectopic pregnancies have been removed through the vagina, but cases are on record where the ovarian artery has slipped from the ligature placed upon it under tension from below, when once that tension has been removed, rapid and very dangerous hæmorrhage has followed. Abdominal section, then, is the only means by which the vessel can be secured, and this has to be carried out immediately under very unfavourable conditions. Fibroid tumours have been frequently removed with or without the uterus *per vaginam*, but if the tumour is subperitoneal, if it is calcified, if the entire tumour is larger than a child's head, or if it is adherent to any extent, the advantage of being able to see and reach the whole working area afforded by abdominal section, especially when performed in the Trendelenburg position, completely counterbalances by its safety the advantages which belong to the vaginal route.

Surgical opinion, therefore, without denying the force of the manifest arguments in favour of vaginal section, recognises that abdominal section has, and must continue to have, a distinct place in pelvic surgery, and the problem of how best to reunite the abdominal wall after an abdominal operation presses once more for a solution.

It could scarcely be said until lately that of all the many ways in which this had been done there existed one method which was ideally perfect. Methods which were rapid were not secure, and those which give a demonstrably secure result were not rapid. As has been pointed out above, the temptation to sacrifice all else to rapidity when the operator had reached the stage at which this had to be done, was very great indeed.

Various opinions are held as to the cause of sequent hernia ; of these, two appear to be most worthy of consideration. Although nowhere definitely stated, so far as I know, the idea of the importance of the action of the recti muscles would appear to underlie the practice of some surgeons. The incision must not lie in the linea alba ; it must separate the muscular bundles of these muscles, or the incision in the skin must not be directly over that in the deeper fascia, whilst that must not coincide with the line of separation of muscular fibre, or the muscle must be dragged to one side, and the deeper incision through the transversalis fascia must be on another plane than that which had opened the muscular sheath. If the muscular fibres are separated they are to be sewn together again. One surgeon makes a crescentic cut through the skin, with its convexity towards the pubes ; then turning up the flap thus formed of skin and subcutaneous fat, he makes a vertical incision through the rest of the abdominal wall into the peritoneal cavity. Those who advocate the first three of these plans evidently trust to the presence of the more or less bulky mass of the rectus muscle and to its contractions for a restraining force ; those who advocate the last to the support of a flap of skin and subcutaneous fat as a reinforcement to the divided and reunited tissues below.

But any one who will study these cases will readily recognise that these openings increase in size primarily in a lateral direction and not vertically. The muscular fibres of the rectus have a vertical pull ; they cannot antagonise to any degree a force acting in a transverse direction. Moreover, it is of little use suturing parallel muscular fibres together. Such fibres never unite to form a resistant scar. It is hardly necessary to point out the futility of relying upon such essentially yielding tissues as skin and subcutaneous fat for the supply of a force sufficient to hold in check the burrowing tendencies of omentum or the pressure of internal abdominal tension.

The alternative opinion would appear to be founded on

sounder principles and to offer the really true basis for action.

Surrounding the recti muscles above the fold of Douglas and passing entirely in front of them below this fold, is the deep fascia of the abdomen. The name is misleading, since this structure is in no sense a fascia, such, for instance, as is the fascia lata of the thigh. It is a tendon, broad and flattened out: the combined tendon of the external and internal oblique and transversalis muscles. It arises from these muscles on one side, and is inserted at the linea alba into the tendon of the muscles of the opposite side. When this insertion is intact the two opposing sets of muscular fibre antagonise one another. Should the one side only contract it pulls the linea alba—the line of insertion—with the inclosed rectus over towards its own side, but it cannot pull it far owing to the resistance of the opposite set. If both contract they draw the linea alba closer to the spine. If, however, this combined tendon is divided, as it is in ordinary laparotomy in the median line, or in Langenbuch's line on either side, each set of muscles, so far as their tendon is free, pulls its segment further and further away from its fellow of the opposite side, until the normal tension is taken off their fibres, so leaving a gap which any further contraction of these fibres still further enlarges. That the true gap through which a hernia escapes is in this layer and formed by this structure can be demonstrated easily in any ventral hernia which will allow of the entrance of a finger. The firm string-like edge of the gap can be traced all round, with no resistance from any other tissue, peritoneum, skin, subcutaneous fat or muscle, except outside this fascial ring. The fingers easily depress all other tissues before them, and enter the abdominal cavity. On operation everything which has escaped from that cavity is found to be within this ring, and not to pass beyond it until, having reached the looser tissues above, these intra-abdominal contents spread out widely and apparently without hindrance in the easily-yielding subcutaneous tissues. Although the skin does not

give way it stretches enormously, so that on reduction of the hernia once more through the fascial gap, such skin lies in loose redundant folds, and may be largely removed without being missed. The skin and subcutaneous tissue have evidently been no restriction to freedom of escape of the abdominal contents; nor, it is equally demonstrable, have the recti muscles. The rectus of either side has simply been deflected from the middle line and lies outside the edge of the gap. If this edge is divided the recti fibres will be seen curved around outside. They are never found spread over the hernia itself. The integrity of the recti muscles themselves and their power of contraction have been no bar to the post-operative hernia.

It is, of course, perfectly well known, though practically the importance of the fact would appear to be usually ignored, that normal muscular fibre contracts at once if the tendon to which it is attached is divided, and that if such division is allowed to continue the muscular fibre itself becomes shortened as time elapses. Reunion of the tendon becomes progressively more and more difficult owing to this; if the statements previously made and their obvious corollary be admitted, this is a very strong reason for early interference in any ventral hernia, but, putting this aside for the moment, it naturally follows from what has been said that the most important structure in the abdominal wall from the standpoint of the surgeon is this so-called deep fascia, this tendon of the lateral muscles; and that the risk of or security from post-operative hernia depends entirely upon the thoroughness with which this has been reunited after division.

Although peritoneum will and does yield to a surprising extent when once its outer support has given way, there can be no doubt that a gap in it enables the omentum to find an exit and so to exert its wonderful power of burrowing amongst the tissues of the abdominal wall. Therefore next in importance to the security of the fascial union, must rank the importance of complete closure of all gaps in the

peritoneum: other reasons, of course, exist for this procedure, but this is from this particular point of view the most important. This closure is in this region usually very easily done. When this is complete and the fascia also firmly united, the muscular fibres of the rectus then assist in the only way they can, by their bulk as a pad between the two, to reinforce the pressure from without, and to fill any dead spaces which might otherwise exist.

The essential thing then is to unite the tendons of the oblique and transversalis muscles in such a complete manner as once more to restore their mutual antagonism and to keep them firmly united long enough for firm organic union to take place between them—a process which, according to Macewen, takes six weeks, but which some observations of my own tend to show is sufficiently firm in a month—by some material which can be trusted to do this, and to remain firm and strong for that period. If at the end of that time all foreign material can be eliminated or removed from the tissues, the ideal method, so far as permanency is concerned, will be attained. If this is not possible the material used should be such as to cause no after-discomfort. It will be seen that this is by no means the simple problem that earlier operations suggest, nor the least important that the surgeon has to consider when planning an abdominal operation.

The ideas which dominate an operator's mind with reference to the structures with which his operation deals, can be fairly deduced from the steps of the operation he performs. Judged in this way, the earliest operators must have looked upon the abdominal wall as practically a homogeneous layer of tissue, which, when union of any sort had taken place, would be equally strong in all its parts.

Sutures were introduced through all the tissues, and these were simply drawn and held together for a certain length of time, which appeared mainly to depend upon the time required for the union of the skin. This method even yet is often adopted for the sake of speed. It is no doubt

the quickest and readiest method, but it will be seen that the union of the definite layers of this covering must be merely a matter of chance. Peritoneum will unite to anything to which it happens to be apposed—to fat, or muscle, fascia, or connective tissue. In most hernias of any duration, the union between the fascial edge and the peritoneum is very intimate; the thin covering which alone exists between the external world and the peritoneal cavity in an old ventral hernia is composed exclusively of skin and peritoneum, with perhaps a few strands of frayed-out fascia near its periphery.

These unions are not merely useless to prevent escape of intra-abdominal contents, but they are distinctly harmful as rendering impossible the union of the more resistant structures until they are once more freed. Union of skin to skin is frequently one of the most rapid of all; and it has not been an infrequent experience to find that this skin union has had to be broken through again to permit of the exit of banked-up blood, serum, liquefied fat, or pus, which has collected in some space between deeper tissues which have been some distance apart. Such a method stands theoretically and practically self-condemned from the point of view of permanency, however it may appeal to the surgeon from the point of speed.

Spencer Wells was the first to point out the necessity of union of peritoneal surfaces, but he only laid stress upon this. The importance of such union has been emphasised by other writers since, for other reasons; notably by Clark, on the score of the advisability of once more producing a closed peritoneal cavity, so as to favour peritoneal currents by means of which bacteria and other foreign material in the abdominal cavity may be carried into the lymphatic spaces, and to prevent adhesions between internal viscera and connective tissue outside this layer; but the other structures of the abdominal wall were still treated as though they all were of equal importance.

It is curious to note the swing of the surgical pendulum

between this method of *laissez faire* and the opposite extremity in a method lately advocated in some of the surgical journals. In this latter every layer has its own continuous suture. Not only peritoneum, fascia, and skin, but parallel muscular fibres, and even the subcutaneous fat, are each united by a continuous silk thread. It is difficult to see the use of this. Parallel muscular fibres do not unite, however long they are apposed to one another. If they did, every muscle in the body would soon become rigid. As to fat, it is of all tissues the most lowly vitalised; the cells which contain it are most easily crushed, and free fat exudes. The passage of a thread through them opens up a way for the exit of their contents, the thread itself becomes soaked in this oily fluid, now practically dead material, and can then only act as an irritant, sooner or later requiring elimination from the living structures. If the intention is to bring the divided fatty surfaces together, and to prevent dead spaces, this can be done equally well by the pressure of the united more solid structures above and below, owing to the elasticity of the material between, which now will not have been crushed or bruised, nor will it contain any dead foreign substance. A dead space is none the less a dead space because it is filled by dead fluids, such as exuded oil.

It is thus demonstrable that the only tissues as to the union of which the surgeon need interfere are the peritoneum, the fascia, and the skin. If these are secure, all the rest fall naturally into their own place, and are far better left untouched.

The union of peritoneum offers no difficulty. The rapidity of its union and its powers of absorption permit of the use of fine catgut, which is readily eliminated as soon as its work is done—as it is within forty-eight hours—and this has never given rise to any evil results.

The union of the skin is equally simple. Sutures or Michel clamps are readily applied and as easily removed when this layer is united. But the union of the combined tendon of the lateral muscles is by no means such a simple

matter. Some material must be used which shall be strong enough to resist, not only the natural pull of the three strong muscles attached to this tendon on either side, but any extraordinary strain which may be placed upon them by chloroform or other vomiting, by cough, or by movements of the patient. Incidentally, it will be recognised how futile it is to depend upon the pressure of strapping, binders, or belts, as a counter-force to this internal muscular contraction. They are useful for the purpose of keeping external dressings in place, or for the feeling of support and comfort which they undoubtedly supply ; but the force they can exert does not, and cannot, effectively act in a contrary direction to the muscular contraction of the obliques and transversales.

And this material must remain strong and firm for a month or six weeks. It is not sufficient to claim for it, as is often done for chronicised gut, that it is not absorbed for that length of time. Long before any material is absorbed it has ceased to have any restraining power. It has become soft, frayed-out, and powerless. It may have held the tissues safely enough for a fortnight, but at the end of that time the patient may cough or strain in urination or defæcation, the lateral muscles contract strongly, perhaps suddenly, the weakened suture stretches or snaps, and the plastic material between the uniting edge of the tendon yields slightly. A repetition of the strain occurs, or several repetitions, and a weak yielding gap between the rigid fascial edges is the result. It needs only some increase in abdominal tension from flatus or other cause to start a small hernia, which will steadily increase from that time onwards.

But any material which will remain strong and firm for six weeks will, on the other hand, probably remain unabsorbed during the life of the patient. Silver wire, bronze aluminium wire, Pagenstecher's thread, celloidin thread, silkworm gut, are all capable of withstanding the strain, but they are all totally unabsorbable, and sooner or

later are almost certain to give evidence of their presence. Pricking, stabbing pains, especially when the recti muscles are in action, slow movement towards the surface, accompanied or not by suppuration around them, have been frequently observed. Buried sutures, therefore, are to be avoided if possible. If, however, a suture must be buried, nothing appears to serve so well as plain silver wire, the ends of these being twisted, and pressed flat against the surface of the fascia.

Since this was written, however, I have had the pleasure and advantage of watching Mr. Rutherford Morison operate on several cases. He uses chromicised catgut of unusual thickness—No. 8 for uniting the fascia—and claims for it that it does remain effective for a sufficient period. I notice, however, that in a very valuable paper contributed by him to the *Edinburgh Medical Journal* this year, he says that in a certain percentage of cases ventral hernia is inevitable, and that the evidence of a surgeon who says that he never sees it may safely be put aside, for he does not care for the after-history of his patients. It occurs, he says, most frequently in very fat and very thin persons. I cannot agree that this condition should be deemed inevitable, even in a small percentage. The word itself suggests that surgeons should be content to accept it as such, and to make no effort to eliminate its possibility. It is with a hope of doing something towards so desirable a result that I have brought forward this subject for discussion. Dr. Macnaughton-Jones also uses this material for this purpose, and so doubtless do others. I am very anxious to obtain their evidence as to its reliability.

I have used glass stretchers for preparing gut and silk. When silk or catgut is used after having been sterilised on reels, I have usually found that it is very apt to become entangled or kinked, so that for a long time I have sought for some means by which a perfectly straight thread might be obtained. With these glass stretchers (fig. A), made for me by Messrs. Woolley, Sons, and Co., of Manchester, I

have been able to obtain them. The silk or gut is fastened securely to one end, and then wound upon them so as to obtain only one layer; the opposite end is again securely fastened. Threads of the same material are then tied around, enclosing the sutures at each of the two points where notches have been cut in the uprights, and where the frame has been strengthened by crossbars of glass. If the material is silk, it can easily be boiled, frame and all, in an ordinary steriliser. If catgut, it requires to be boiled under pressure in cumol or xylol, and must be enclosed in some watertight receptacle, such as the gun-metal cylinders of Mayo Robson. But those cylinders will not take these



FIG. A.

stretchers, and I have had a rectangular one made by the same firm which supports the glass frame in such a position that the sterilising fluid can act upon every part of the suture. This is, indeed, one of the main advantages of using these glass frames. All parts of the suture—that turned to the frame, as well as that outside—are equally exposed. When a suture is wound upon a wooden or glass plate, the side next to the plate is to some extent protected; it is not so in these open stretchers. Glass has been used because it is so easily cleansed, and will itself resist the action of boiling fluids. When sterilisation has been done, the threads are cut across at one end of the stretcher, and each double thread can be drawn off from the other end without disturbing the rest. After they have been cut, the advantage of the two cross threads which keep them in place against the stretcher will be appreciated. The stretchers are then kept in wide-mouthed bottles—silk in

Bergmann's solution, catgut in absolute alcohol with $\frac{1}{2}$ per cent. sterile glycerine.

The way in which the sutures are placed is of importance. Inasmuch as they have to resist a constant and persistent pull, it is essential that they should not cut through the tissues and so become loose. If applied in the ordinary way this is very likely to happen, especially when the material used is wire of any kind. Moreover, if the fascial edges only are approximated the area of union is but a thin line, and is consequently stretched or torn through with comparative ease. Noble, whose example I have followed for a considerable time, carefully clears the upper surface of the fascial layer for a distance of 2 to 3 cm. on one side, and the under surface of its opposite for a similar distance, from all fat, and then places mattress sutures in such a way as to draw one side of the fascia beneath the other and fix it there, so obtaining a broad double union, which is correspondingly stronger, and more likely to be permanent.

But a method which leaves behind foreign material in the living tissues which cannot be absorbed cannot be considered ideal, and it would be a great advantage if at the end of six weeks this could be removed without reopening the wound. Lately, three or four ways in which this may be done have been proposed and carried out with success. In the first the two ends of the wire sutures placed as above described in the fascia have been made to penetrate the skin and superficial fascia above, and have been twisted over the bridge of skin between; or, better still, since such wires tend to cut through the skin, over a pad of gauze placed between them; but in some cases, where the subcutaneous layer of fat is very thick, it is useless to attempt to fix the wire outside, the pressure exerted by the pad being rendered nugatory by the consequent absorption of this layer, the wire loop becoming loose, and permitting the fascial layers to separate once more, omentum to insinuate itself between them, and the

hernia again to recur. In such cases two courses are open ; first, to tighten the loop from time to time ; or, second, to apply the wire suture in a figure-of-eight fashion, allowing the lower loop simply to grip the fascial layers. Of the two methods the latter is often to be preferred. It seems impossible accurately to gauge the rate of absorption of the fatty layer ; the loop may possibly be left too long untightened, and if once omentum has gained a foothold between the fascial edges, it will continue to enlarge the—often minute—opening thus formed.

If the figure-of-eight method is used, the wire is introduced through the skin on one side, penetrating the subcutaneous fatty layer in an oblique manner, and emerging in the wound just above the fascia. It is then carried to

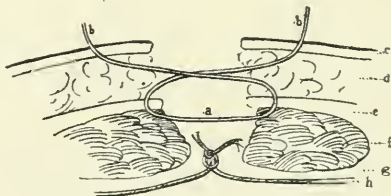


FIG. 1.

the opposite side, reversed and made to pierce the fascia of that side from above downwards about a centimetre from its edge. Both layers of fascia have previously been cleared of fat on their lower surface for that distance. Passing beneath this, the needle is carried through the fascia on the original side from below upwards at a point the same distance from its edge. The needle is again reversed, and carried through the subcutaneous tissue and fat obliquely upwards to emerge through the skin at a point corresponding to that by which it first entered, but on the opposite side of the wound. By pulling upon both ends of the wire in a direction from the wound, the two fascial under surfaces are brought together and held firmly opposed to one another. The skin edges are then adjusted,

a layer of gauze laid over them, and the ends of the wires are brought together over this and twisted together, so closing the skin wound and bringing the divided subcutaneous tissue surfaces in contact. When it is required to remove the wire this is slightly pulled out on one side and divided close to the skin. A steady pull upon the other end draws it out. Thus in figs. 1, 2, 3, *c* marks the skin, *d* the subcutaneous fat, *e* the fascia, *f* the rectus muscle, *g* the

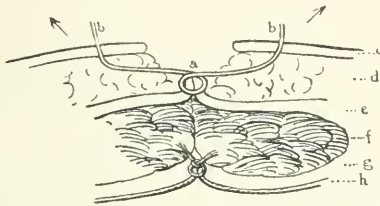


FIG. 2.

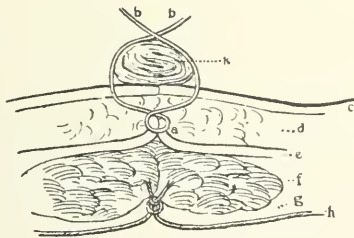


FIG. 3.

subperitoneal fat, *h* the peritoneum. In fig. 1 the peritoneum is united; the wire sutures are placed but not drawn up. In fig. 2 the fascia is drawn together by tightening the loop *a*, by pulling upon both ends of the wire in a direction obliquely from the wound as indicated by the arrows. In fig. 3 the loop *b* is completed, and by tightening this over the pad *k*, the skin and subcutaneous fat are thus approximated. It will be noticed that the tightening of loop *a* has approximated the muscular layer *f* and the transversalis fascia *g*.

With this method it is evident that absorption of the fatty layer enclosed in the loop *b* will have no influence upon loop *a*, which will still remain tight, owing to the rigidity of the silver wire. Silkworm-gut is not so effective, as with it the firmness of the loop *a* will depend on the tension in both loops. This method is probably the quickest of all those which permit removal of the foreign material uniting the fascia, and therefore will be preferred by many surgeons, and probably by all in cases where the rapid

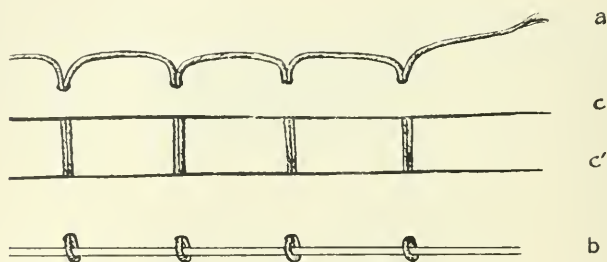


FIG. 4.

closure of the abdominal opening is important. But the removal of these wires is sometimes painful, and another method has lately been introduced by Milton, of Cairo, which is neater, and renders after-removal less painful. The central idea of his method is the use of the lock stitch, and he uses it in the following way, which fig. 4 may help to render clearer. Two threads are used: *a*, the primary thread; and *b*, the secondary thread. In the figure, which represents the wound looked at from above, *c* *c'* represent the two edges of the fascia which are to be united. A sharp-eyed needle carrying a long silk thread is carried through fascia *c* on one side from above downwards, and through the fascia *c'* on the other side from below upwards; as it protrudes on this side, a loop of silk is pulled out and the needle is withdrawn, still carrying the thread. This is again carried through both layers of fascia in the same

way, a third of an inch further on, a loop drawn out, and so on. Through each loop the secondary thread *b* is passed; when all the loops are placed they are drawn up in turn, so tightening around the secondary thread and approximating the two under surfaces of the fascia. At each end of the wound the respective ends are brought up through the skin, and the end of *a* is tied to the corresponding end of *b*. When it is desired to withdraw the threads, the ends of both are cut through close to the skin at one end of the wound, and the secondary thread *b* is drawn out; this sets free all the loops, and traction upon the end of the primary thread will draw it also out of the wound, leaving in this way no buried suture.

This is a very admirable method, but it has certain drawbacks. I have found that however tightly both ends may be held, during the process of tightening up, the secondary thread is almost unavoidably bent at the points embraced by the primary thread. When the time comes to withdraw the threads, it is evident that if applied as Milton advises, the secondary thread must be first removed in order to set free the other. If the secondary thread is silver wire this is almost impossible; the slight kinking produced is sufficient to render it extremely difficult to release the wire from the bite of the primary thread; if it is of silkworm-gut this is apt to break at these points, and so a foreign body is left behind, and the main object of the method—the removal of all buried foreign bodies when deep union is complete—is not obtained. In order to avoid this I have modified the plan in the following way, so as to be able to remove the primary thread first, so setting free the secondary, which can then be easily drawn out.

The secondary thread *b* may be either wire or silkworm-gut; the latter, I think, is preferable. The primary thread *a* is interrupted, and made up of several silkworm-gut threads introduced as single loops by means of an eyed needle. Each loop is passed through the skin, subcutaneous

tissue and fascia of the right side of the wound, emerging in the wound below the fascia of that side; it is carried onwards below the fascia on the left side, and penetrates this layer from below, emerging on its upper surface; the secondary thread is passed through each loop. When all the loops are in place, and the skin wound united by other

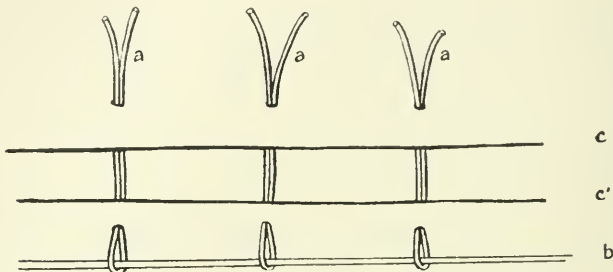


FIG. 5.

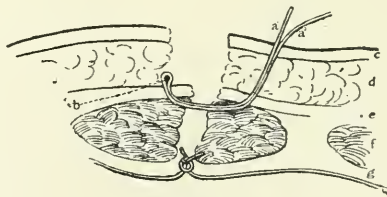


FIG. 6.

sutures, the secondary thread is held tight at each end to prevent kinking, whilst each loop is drawn taut, the two ends of it which emerge from one opening on the right side of the wound are separated, a gauze pad *k* placed between them, and they are then tied over this pad.

The pressure of the secondary thread on one side is thus opposed by the pressure of the pad on the skin above, and the two surfaces of the fascia are drawn together and held in position by them.

Fig. 5 shows the position of the wound and threads;

looked at from above, *c c'* are the two edges of the divided fascia, *b* the secondary thread, *a a a* the interrupted loops of silkworm-gut. Figs. 6 and 7 represent a vertical section through the abdominal wall, the various layers of which are lettered as before. In fig. 6 a loop is placed *a a'*, and through its extremity is seen the cut end of the secondary thread *b*. In fig. 7 it is tightened up, and a pad *k* is placed between the two ends of the looped thread; when tied it brings the two under surfaces of the fascia firmly together.

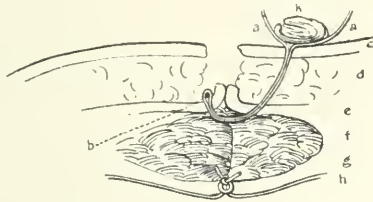


FIG. 7.

The same objection holds good with this modification in cases where the fatty layer is thick and may become absorbed, so loosening the grip of the loops. In all such cases it will be advisable to use Milton's original plan of application, but in cases where this layer is thin I have found the modification easy of performance, and giving a perfect result. The loops should be applied at distances of one-third of an inch from each other, and should so pierce the fascia as to bring together a corresponding width of fascia on both sides. Removal is easy; one-thread of each loop is divided close to the skin beside the gauze pad; pulling on the other end quickly releases it, and it is drawn out. When once all the loops are free, the secondary thread is easily withdrawn whether slightly kinked or not. Care must be taken in all cases to carry the suturing for at least half an inch at each extremity beyond the line of

fascial division, so as to produce a fold in the yet undivided tissue.

By the use of one or other of these plans it will be evident that we possess means by which the all-important tendinous expansion known as the deep fascia may be reunited safely and permanently, and that the latter methods also enable us, when organic union is firm, to remove all foreign material from the interior of the wound.

Something more might be said as to the different behaviour of the tissues in different parts of the abdominal wall, especially as to the difficulty experienced in the reunion of peritoneum near the epigastrium as compared with the ease of this manœuvre below the umbilicus, and certain modifications which thereby become necessary, but this paper is already too long, and they must be left for future statement.

When a large hernia has to be closed, and the fascial edges are widely separated, the method adopted by both Dr. Macnaughton-Jones and Mr. Rutherford Morison, of placing stay sutures so as to embrace the whole rectus muscle, and so obtain a firmer and more comprehensive grip of the tendon on either side, is an admirable one, but does not, in my opinion, dispense with the necessity for obtaining a broad union of the actual opposing portions of this tendon such as is produced by the Noble method. It is an accessory of very great use, but not the primary requisite. Dr. Macnaughton-Jones uses strong silver wire; Mr. Rutherford Morison strong chromicised gut. After all, these are measures for the cure, not for the prevention of post-operative hernia.

DISCUSSION.

Dr. MACNAUGHTON-JONES said that while all operators acknowledged the importance of securing as perfect an abdominal toilet as possible, different surgeons gave

preference to different methods, and each generally considered his own the best. Mr. Stanmore Bishop accurately represented in his diagram the method he (Dr. Macnaughton-Jones) usually followed of closing the abdominal wall. It was practically the same as that originally advised by Noble, of Philadelphia. He showed by diagram another method of mattress suture recently introduced by Noble. His (Dr. Macnaughton-Jones) method included closure of the peritoneum by a fine continuous cumol-gut suture, and the fascia, after dissection from the rectus muscle, was united by a continuous suture passing through it and looping up the muscle at either side before penetrating the fascia at the opposite side, and thus closing the wound either by complete adaptation or slight over-lapping of the aponeurosis through its entire extent. Any apparently weak points were then secured by an interrupted suture, the skin was stitched with celloidinzwirn. In the largest ventral hernia he had ever seen, in which there was a huge protrusion over the pubes, he had adopted the following plan with complete success: the necessary dissections having been made to sever the adhesions of the bowel and omentum to the skin, and to separate these from the dense fascia which had formed underneath in the middle line, as also to clear the recti muscles, mattress sutures of silver wire were carried alternately from one side to the other, from the outer border of the rectus at one side, including its fascia, under the dissected central fascia and including it, and were brought out through corresponding points on the opposite side. There were thus three loops and three double strands at either side, and a strong suture, also of silver, was passed at the upper and the lower ends of the wound, which extended from just below the umbilicus to the pubes. These silver sutures were buried, and the skin closed over them with silkworm-gut. The closure was complete and permanent, and has remained so up to the present time without giving rise to any trouble. Bumm, of Berlin, lays special stress in these cases of large hernia on the impor-

tance of flexion of the trunk while suturing, and of complete separation of the rectus sheath from the muscle, so as to relieve the tension in the adjustment of the fascia. His own (Dr. Macnaughton-Jones) experience of post-operative hernia was limited to three cases. In the first case the wound had been twice deliberately opened by the patient, who was mentally afflicted, but was finally and perfectly closed by a third operation. The second was a very small protrusion, so slight that the patient refused to have it interfered with, three years after the operation; and the third he had seen this year, in which there was an opening at the lower end of the wound, in a case in which the operation was performed under desperate conditions, and where it was absolutely necessary to close the wound with through-and-through sutures. If there had been hernia in any other cases of his, he had never heard of it. In 872 cases of abdominal section reported by Charles Noble, there was suppuration in only 10, and hernia in only 2. Paul Zweifel, in cases of fat women and where there was a doubt as to the security of his special interlacing suture, passed with his large needle three strong strands of chromicised cumol-gut as through-and-through sutures, at even distances, and tied these finally. He (Dr. Macnaughton-Jones) had himself pursued this method in some similar cases.

Mr. CHARLES RYALL remarked that while our aim in closing the laparotomy incision must be to bring the parts as nearly as possible into their original anatomical position by uniting each layer, the essential thing was to see that the aponeurosis was united throughout the whole length of the wound. The union of muscle would not prevent hernia, and that of the peritoneum did not add much strength to the cicatrix, though it was important in preventing adhesions. The posterior sheath of the rectus was prone to retract with, but more than, the peritoneum, and this, he thought, led to imperfect union and consequent hernia in some cases. An important prophylactic measure was prolonged rest, and this the hospital surgeon could not always

give his patients. He thought that post-operative hernias were not by any means invariably reported to the operator.

Dr. MACNAUGHTON-JONES, jun., remarked that as both ends of the sutures passed through the skin on the same side, in the method of suturing suggested by Mr. Stanmore Bishop, the edges of the fascia would be drawn beneath the skin on that side, and the operator would have a difficulty in seeing whether they were in accurate apposition. This difficulty would be greater when securing sutures after a number had already been tied.

Dr. J. J. MACAN said that it was a matter for regret that those Fellows of the Society who were in the habit of using the through-and-through suture, and who were known to obtain good results by it, were not present to take part in the discussion. A recent inquiry by Dr. W. H. Swaffield had shown that among upwards of fifty of the most distinguished surgeons in Germany and Austria, less than a dozen adhered to the simple through-and-through suture in median laparotomies, and three of those modified the practice in some way. The remaining forty-six preferred some method of suture in layers. There could be little doubt that since the almost general adoption of suture in layers, post-operative hernia had been less frequent and less severe than formerly.

The PRESIDENT expressed his appreciation of the practical manner in which Mr. Bishop had treated a subject of extreme interest to all operating surgeons, and said that he concurred in the opinion that immediate union of the peritoneum, as well as of the tendon, was of service in the solidity of the abdominal cicatrix. On that point he must join issue with Mr. Ryall, for he had found in the *post-mortem* room that a union which externally appeared perfect might be absolutely incomplete on the peritoneal surface, and the only points of union be where each suture passed through the abdominal wall, gaps being left between the sutures almost inviting the omentum to protrude. For the last eight or nine years he had employed a simple method,

which in his experience had not been followed by hernia. He united the peritoneum with a continuous suture of the finest silk, generally figured No. 000, and sterilised by boiling in a solution of biniodide of mercury. He then passed sutures of silkworm-gut at short intervals of about half an inch through skin, fascia and muscle, without including the peritoneum, but, before tying these, he united the fascia for the whole length of the wound, with a close continuous suture of the same fine silk as that used for the peritoneum. The silkworm-gut sutures were then tied. The interrupted sutures remained, to support the fine ones, for ten days, and were then withdrawn; the silk ones were left. He had found slight indications of these two months after the operation in a patient who died of slow sepsis after a supra-vaginal hysterectomy, but in another, in whom he reopened after about a year for obstruction by a band, the silk had been completely absorbed. In only three instances had the silk given any trouble, and these occurred before he knew the best mode of sterilising the silk by boiling in biniodide solution, of a strength approximately one per mille, made by adding one soloid of mercuric potassium iodide (8.75 gr.; B. and W.) to one pint of water in a steriliser.

Mr. STANMORE BISHOP, in reply, said that in his experience cases of hernia after operation did come back to the operator, and he had no reason to suppose that he had failed to hear of any single case of his own. In regard to the material for sutures they were all agreed that all buried sutures should be absorbable, that is to say, after they had done their work. Neither silkworm-gut nor wire were so; and catgut was apt to give way, or, if used of the thickness (No. 8) sometimes employed, was almost impossible to sterilise. Within the last few days he had heard of a case of tetanus following the use of imperfectly sterilised catgut. Of course, if one could rely on catgut being absolutely germ-free, the difficulty would vanish. The view that post-operative hernia might be due to overlooking

the posterior sheath of the rectus merited serious consideration. It was a mistake to suppose that in his method there was any difficulty in obtaining a clear view of the fascia ; it was perfectly easy to assure one's self by sight, still more satisfactorily by touch, that the aponeurosis had been properly united for the whole of its length.

NEW FELLOWS.

THEIR names having been previously submitted to the Council and posted at an Ordinary Meeting of the Society, after having appeared on the Agenda Paper summoning that meeting, the following candidates for the Fellowship have been duly elected :—

Bale, Rosa Elizabeth, L.R.C.P. & L.R.C.S.Edin.,
L.F.P.S.Glasg., 24, Portland Square, Plymouth.

Jones, Mary Dixon, M.D., 62, East 86th Street, New
York.

Phillips, Mary Elizabeth, M.B.Lond., Presbeli, Merthyr
Cynog, Brecon.

Campbell, Ernest Alexander, L.R.C.P. & L.R.C.S.
Edin., L.F.P.S.Glasg., 25, Bow Road, E.

George, Jessie Eleanor, L.R.C.P. & L.R.C.S.Edin.,
L.M.Dub., Ishwari Memorial Hospital, Benares, India.

Phillips, Miles Harris, M.B., B.S.Lond., M.R.C.S.Eng.,
Avon View, Portishead, Somerset.

Smith, William Robert, M.D., B.S.Lond., F.R.C.S.Eng.,
Beeston, Notts.

Clark, Ann Elizabeth, M.D.(Berne), M.R.C.P.I., and
L.M., 4, Calthorpe Road, Edgbaston, Birmingham.

Sturge, Mary Darby, M.D.Lond., 45, Hagley Road,
Edgbaston, Birmingham.

Bernard, Claude Abel, M.D.Bordeaux, Roc Maria,
Dinard, Brittany, France.

Chipman, Walter William, McGill University, Montreal,
M.D., F.R.C.S.Edin., Professor of Obstetrics and
Gynaecology in McGill University.

ORIGINAL COMMUNICATION.

BELASTUNGSLAGERUNG.

ELEVATION OF THE PELVIS AS AN AID IN THE TREATMENT OF INFLAMMATORY, ESPECIALLY OF EXUDATIVE, PELVIC AFFECTIONS BY COMPRESSION.¹

By LUDWIG PINCUS, M.D., &c., Danzig.

WITH more matured experience I again venture upon the consideration of this subject, which an extensive literature and the active interest of my gynæcological colleagues show is one of essential importance in the treatment of diseases of women in hospital, and even more particularly in private practice.

My article on "Belastungslagerung" in the Festschrift, dedicated to Heinrich Abegg (I.) upon the fiftieth anniversary of his doctorate, very soon became widely known, even among general practitioners, in consequence of numerous communications to medical societies, and an article upon the subject published in the *Therapeutische Monatsheft*.²

It was seen that in successfully contending with and curing disease, one had to rely upon sound empiricism, and practitioners were taught much by the lack of therapeutical

¹ The author in his original article (*Zeitschrift f. Geb. u. Gyn.*, Bd. xxxix., S. 13) defines his method as "Treatment by position on an inclined plane while continued or intermittent compression is applied to the exudation or inflammation, from the surface of the abdomen, or from the vagina, or at the same time from both, '*Positio in plano inclinato cum Compressione.*'"

² An address to the Munich Congress of Naturalists and Physicians, September, 1899, elaborated on the ground of further experience. Festschrift, on the twenty-fifth anniversary of the foundation of the Dantzig Medical Society, December 19, 1901.

means at their disposal. There was even then a real and evident want for this new method of dealing with gynæcological disease. The treatment of inflammatory affections of the abdomen ordinarily adopted, by no means corresponds with the knowledge and improved possibilities now available. From physiology and morbid anatomy we have learned facts and principles which must be applied to the pathology and treatment of the diseases in question, with better and more permanent results.

The subject has become in every respect of more practical importance than it was, for during the last few years a most gratifying reaction has taken place in the opinions held upon the efficacy of so-called adnexal operations. This was inevitable, for conservative treatment has proved to be efficient and indispensable.

In reporting the proceedings of the Munich Congress, the writer in the *Therapeutische Monatsheft* said very justly (II.): "It is to be noticed as an encouraging fact that at this Congress the opponents of indiscriminate operative interference in adnexal disease, in opposition to those who extirpate every tube and ovary that exhibits the slightest pathological change, for the first time advocated conservative measures under general approval." This conservative principle, was again put forward at the Aix meeting in 1900, and is the *nova veritas* expressed in the conclusions of my original article.

There can be no longer any doubt that in adnexal disease some means of treatment other than the operative measures hitherto adopted is absolutely required, especially in private practice. It is evident from reliable observations of others beside myself that the fact must be faced that far better and more immediate results may be obtained by "Belastungslagerung" than by any other resorbent method hitherto known, and that under it women in whom, under the principles formerly accepted, mutilating operations would, *à priori*, have appeared to be indispensable, become functionally not merely capable but active.

But this in no way implies a declared opposition to operation on principle. It is clear that in hospital practice as long as "incapability for work" has to be accepted as a direct indication, operative treatment must prevail, and this must continue to be so until the movement, promoted by v. Winckel, Fritsch, G. Klein and others, to build asylums for women with pelvic diseases is actually carried out.

In 1898, shortly after the appearance of the *Festschrift*, Funke, of the Strassburg University Frauenklinik, published his esteemed article (III.) on "Schrotbelastung," a lucid elaboration of the principle of treatment enunciated by W. A. Freund, at the Meeting of German Naturalists and Physicians at Brunswick, in the previous year (*Resorption-skuren*, IV.).

It would be futile to raise any question as to "priority" which does not depend merely upon the order of publication as regards date, but also upon fundamental facts. It will be shown further on that in many respects there is a surprising accordance in the views expressed, but that the two methods of cure, developed quite independently though finally absolutely complementary to each other, exhibit fundamental points of difference.

The points of accordance are so remarkable, that Funke added as his closing phrase: "For the rest, I have pleasure in the fact that the views of Herr Pincus in many respects agree with mine. That some of the principles I have enunciated are, almost word for word, identical with his, seems to be a proof that those principles are correct."

I shall try to make clear in the present work that Funke's article and mine supplement each other in the happiest way, though the literature of the subject shows that, from circumstances not entirely depending on myself, some misunderstandings arose which, however, can be easily and quite satisfactorily explained.

The consideration due to my fellow-workers in the *Festschrift* led me, at the last moment, owing to the great length of my article, to recall from the press the case

histories, which, with the critical remarks upon them, the editor had designed to print *in extenso*, as an appendix. An incompleteness in the treatise was therefore unavoidable, though perhaps not at first very remarkable.

The misunderstandings affected the indications for treatment, as well as the technique of my method. For instance, in acute affections I advised that a nominal elevation (15 but not exceeding 25 cm.) with an intermittent and limited external compression, should be tried in the gentlest way possible and under the most careful precautions, and that no intravaginal treatment should be attempted until the period of fever could be considered overpast. This view, though clearly explained in the treatise, was more precisely set forth in the case histories.

In regard to the methods of intravaginal compression and its technique, a sharp distinction was drawn between the action of the shot bag and that of the air pessary, and between the colpeurynter and the graduated tampon (Staffel-tamponade); some indications were given for the shot bag, others for Gariel's air pessary, and so forth; the different ways of applying intravaginal compression were treated not as equivalent, but as complementary factors which, with the inclined plane, contributed to form the typical method of "Belastungslagerung."

The inclined plane was employed not merely as a means of accelerating the circulation of the blood, but as an important way of making the action of the shot bag as effective as possible, and also of bringing into action and utilising the traction effect of the organs when they gravitated out of the pelvis. The "Belastung," the compression, is partly direct from the pressure employed, partly indirect from the traction of the pelvic and abdominal viscera, according to the laws of gravity.

It must be clearly understood that in regard to the indications, there is a fundamental difference between intravaginal compression with the shot bag, as practised by me more than ten years ago, and the use of Gariel's air pessary

or other equivalent factors ; that it is just when intravaginal compression with the bag of shot, or quicksilver (Schauta) ceases to act, that the air colpeurynter and such like become beneficial in the treatment. This also, though mentioned, was not so definitely expressed in the text of my article as it was in the appendix of case histories.

It must, moreover, be once more clearly stated that the colpeurynter and its modifications or substitutes, such as the graduated tampon, are not merely indispensable elements in typical position-treatment, but that in a very remarkable manner they also afford the only possible means of treating, with the best and most rapid success, chronic exudative processes in the pelvis, in suitable cases even while going about (*ambulaut*). The fact that these modifications of position-treatment allow one to deal successfully with chronic, high-seated exudations and their consequences in the out-patient or consulting room, is overlooked by almost all authors.

Quite apart from this, there should be no conflict of opinion, no question as to whether the bag of shot, or some modification of it, is more useful than the air pessary or anything of that kind ; the gist of the matter, as I put it in definite words in my address at Munich (1899), is that in the new force, Belastungslagerung, which must be accepted as a perfectly typical therapeutical method, these individual and essentially complementary factors mutually and profitably supplement one another.

For some reasons it might have been desirable to make this view—the one I have held from the first, and which I hope to establish in this paper—more fully known sooner ; but it seemed more scientific and at the same time more convenient, to wait for the publication of other articles on the subject, so that everything that after careful testing in hospital practice had proved beneficial or useful, might be adopted into the method. Apparently this course has been justified, for owing to publications by Halban (v.) of Schauta's Klinik, by Funke (vi.) of W. A. Freund's, and a

recent dissertation by E. Wolff (VII.) from the Klinik of Olshausen, there is now some prospect of presenting the subject in a complete form. The task is assisted by some remarks in Fritsch's Text-book (VIII.), by the discussion following Halban's address (IX.), and that after Steffecks (X.), and some remarks in the discussion at the Meeting of German Naturalists and Physicians at Aix (1900); an article by Manswetoff (XI.), and one by Beckers (XII.), with an epilogue by Adler (XIII.), may also be mentioned. As I am aware that other special treatises on position-treatment are in course of preparation, it seems for various reasons unpractical to delay the publication of the present article any longer.

A few remarks are necessary on the development of my method. I have given in my former articles details of the profound literary research which I felt it my duty to undertake (Hippocrates), merely to avoid the question of priority, before bringing forward my new method. These researches showed that some of the factors in position-treatment were no doubt well known and esteemed therapeutically, but that their complementary significance to each other was unknown or at all events ignored. Now, as Wolff puts it in his dissertation (*l. c.* p. 37), "One must admit that of the two factors, elevation and compression, neither is very effective when employed by itself, and that it is entirely to their happy combination that the favourable results are due."

Auvard (XIV.) employed compression, both external and intravaginal, but not elevation. Aveling (XV.) and Emmett (XVI.) recommended elevation of the pelvis to diminish uterine hæmorrhage and to oppose inflammatory processes in the pelvis, but do not mention compression. Lobingier (XVII.) again recommended the mechanical force of gravity, the suction effect of respiration and the use of abdominal binders; Wernitz (XVIII.) elastic abdominal bandages for compression. Donaldson (XIX.), Campbell (XX.), Courty (XXI.), Bozeman (XXII.) (XXIII.), and others, advised the

knee-elbow or knee-breast position, which, however, as will be explained in detail, are useless for our purpose. Oliver (XXIV.) and others reinforced the resorbent power by stimulating the tone of the muscles and vessels; and so forth. Indeed, as Goethe said: "Everything worth knowing has been thought of already."

The historical development of the therapeutical use of compression I naturally made a subject of personal study, in regard to which I must, for independent reasons, refer to my former article, merely mentioning that researches made in the Royal Library in Berlin during 1895-6, in preparing it for publication, showed that no method appreciating the complementary significance of the factors above mentioned had been described. The only thing of the kind were a few remarks by myself in an article upon muscular constipation, which had appeared about a year earlier in the *Archiv f. Gynäkologie* (XXV.), pointing out the usefulness of elevation and compression with wet potters' clay. The word "Belastungslagerung" had not at that time been intentionally used; it appeared first in an article upon atmokausis in 1898 (XXVI.). I should like the term retained rather than replaced by Halban's "Belastungstherapie"; it is more significant, as "Lagerung," that is, "position," is a typical factor in the treatment.

In position-treatment we have nothing whatever to do with stereotyped prescriptions; "what is to be done and what to be left undone" must be decided most carefully in each individual case. The therapeutic combination disclosing itself in each single instance is that which will be useful. The natural resorbent powers of the system must be brought into action, supported and reinforced, while the local pain and consequent congestion are diminished by placing the diseased organs in the position of most complete rest possible. The only typical elements in the method are a moderate elevation of the pelvis and lower extremities, and compression in the various forms employed.

The inclined plane is never elevated to the acute angle

of the typical Trendelenburg position, and differs also from that position in the legs being extended. In the patient's house the simplest arrangement is to raise the foot end of the bed on props of some kind, blocks of wood, bricks, or such like. For hospital and intermittent use hammock cloths in iron frames are most convenient. They must be made of strong ticking of the width of the bedstead and passed over a roller at the foot, so as to be made fast at any desired elevation.

One may also, as a makeshift, even for intermittent use, fit a strong hook at each side of the foot-end of the

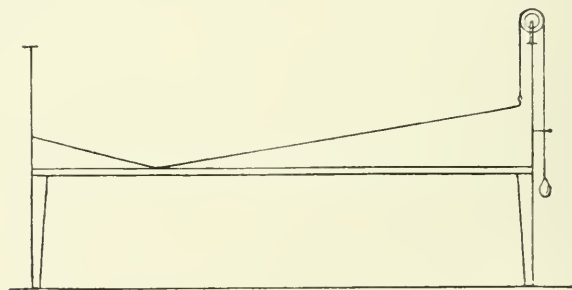


FIG. 1.

mattress, so that it can be raised up. All that is then wanted is a crossboard under the head of the mattress. The patient's head must always be somewhat high, preferably upon a horsehair bolster. As Fritsch says (*l. c.* p. 470): "The patient, for this treatment, must lie with her pelvis from 10 to 15 cm. higher than her thorax, a position which is well borne." For ordinary cases, that is to say, decidedly chronic affections, it is sufficient to raise the foot end from 20 to 30 or 35 cm., and from numerous carefully made observations we find that the extreme height admissible for our present object is no more than 40 cm. Greater elevations are seldom endured, even by not very sensitive women, for more than a part of an hour, and, though used intermittently they are sometimes very beneficial, are seldom

necessary. They often cause cramps in the calves and cerebral oppression, though here also there is no universal rule. During the night the elevation should not exceed 25 cm., in order that the patient may lie comfortably and sleep undisturbed. In this respect, however, a few days' practice makes a great difference. In women who suffer from cramps in the calves of the legs and varicosities, the bandages worn during the day time may be left on at night, but should be changed daily, and before the bandages are applied the blood should be encouraged to flow away by lifting up the legs. For our purposes the best bandages are of Japanese Picot.

The rules laid down by me have always been identical with those just given. In nearly every case the elevation of the foot end of the bed above the horizontal has been from 20 to 35 cm., and it has been quite an exception for a height of 40 cm. to be used, even intermittently, and such an elevation is only possible in insensitive women, suffering from old and distinctly chronic processes. In acute cases, always provided there were no symptoms of peritoneal inflammation, or very slight ones only, elevation was tried with great caution and the foot end of the bed was never raised more than from 15 to 25 cm., just enough to facilitate flow of the venous blood and lymph away from the uterus.

Everything described in my former article was derived from the experience of many years' careful and critical study during busy practice. Never, even in chronic cases, was any foolhardy attempt made to raise the foot end of the bed so high that it could be supported by a chair set underneath it. Clinical experience has recently shown (Halban, Wolff) that, as regards chronic inflammation, this caution was perhaps excessive. That women with acute inflammation of the parametrium could not endure such an elevation of the pelvis is self evident (Halban).

I am, however, firmly convinced that the method cannot be generally recommended, in acute inflammations, simply because it is not possible to lay down strictly

limited indications in a few words. Too much depends on momentary observation and effects and, therefore, upon accidental circumstances too much dominated by the subjective opinions of the individual. Moreover, it would necessarily pre-suppose such an intimate acquaintance with the subject as can only be expected from an experienced specialist.

A moderate elevation of the bed (15, 20 or 25 cm.) should also be the rule, in order to guard against congestive thromboses as far as possible and to ameliorate such as are due to infection. Further precepts in regard to compression must for the present be held in reserve, attention may, however, again be drawn to the fact, very clearly stated already in the *Festschrift*, that intravaginal compression is never to be prescribed until the period of fever may be considered quite passed away.

Just as in *atmokausis*, in order that the method may be assured a permanent place in therapeutics, one must, in position-treatment, depend entirely upon what is absolutely certain from experience, so I shall continue to collect suitable observations and if they should, on analysis, yield any useful results not dependent on accidental circumstances, will describe them hereafter for my fellow-labourers in gynaecology. With this in view, I would beg those with hospital opportunities to institute further trials, since observations suitable for such analysis can seldom be made in private practice or without the collective responsibility of the hospital staff.

Si illum objurges, vitae qui auxilium tulit,
Quid facias illi, qui dederit damnum aut malum
(Terentius, in *Andria*, Act I, i.)

As already prominently set forth in the *Festschrift*, the guiding principle to be insisted on is that the peculiar domain of *Belastungslagerung* is the treatment of distinctly chronic exudations.

By such moderate elevation as above described one may in chronic inflammatory processes succeed in greatly

relieving the pelvic organs, and so far as those viscera are at all movable, lift them out of the pelvis to an extent quite sufficient for our purpose. At the same time the acceleration of the return flow of the blood and lymph causes mechanically a material improvement in the circulation, and an auto-transfusion to the medulla oblongata and to the heart of patients anæmic from many causes, which invigorates the circulation and enlivens the vital processes. We should remember how often the action of auto-transfusion in the acute anæmia of recently delivered women is extremely beneficial, and that from inflamed parts of the body the lymph poured out is not only more plentiful in amount, but also richer in cell elements than usual.

There can be no doubt that moderate elevation of the pelvis, such as I recommend, constitutes an important factor in the treatment of inflammatory pelvic affections. This is entirely in harmony with the theoretical view and is taught with absolute certainty by the observation of cases in practice; it has, to my great satisfaction, been demonstrated by trials in Olshausen's Klinik, and requires no further proof. But one remark may be permitted: "Pain in the hypogastric viscera, apart from strangling or dragging adhesions, for the most part arises from hæmal congestion. Whether it be cause or effect, such congestion will always be diminished and relieved, to the subjective and objective benefit of the patient, by repose upon the inclined plane, and this quite independently of the action of complementary compression. The return of the venous blood is accelerated and the arterial circulation thereby stimulated, for normal blood is an excellent stimulant for the healthy endocardium; an influx of blood will rouse even the paralytic heart indirectly to activity, directly to rhythm." To this passage from the *Festschrift* I may here add that by moderate elevation of the pelvis one can to a certain extent paralyse the deleterious influence of defective bodily nutrition upon resorption. This observation, made in practice, is necessarily of practical importance.

The inclined plane has been compared with the elevation and swathing of an extremity, a method which surgeons successfully employ to subdue declared lymphangitis, or lymphadenitis, but the statement must not be taken too literally. An analogy only should be sought in the comparison. Moreover, it is always wiser not to express an opinion on any new method of treatment until one has tried it.

Although great importance is attached to improving the circulation of the blood, our treatment should never be directed to this object alone, but the irritated and inflamed adhesions should, as already pointed out, be relieved by the traction of the viscera themselves as soon as, under the laws of gravity, the latter begin to fall towards the abdominal cavity or, as it were, to be drawn away from their beds. That this takes place to a notable extent, even when the bed-foot is raised to no more than 30 cm., is easily proved by an internal examination, in conducting which, however, care must be taken that as little air as possible enters the vagina, for otherwise the examination will be misleading.

Finally, elevation of the pelvis is employed, is, indeed, specially devised as the only possible means of applying intravaginal compression rationally in the first place, and of obtaining any gradual increase in such compression in the second. This is as self-evident as the fact that, just like the quicksilver, the mobile grains of shot always find their way where the opposed resistance is weakest. The weight does not act directly until the equilibrium has been established. More will be said on this point hereafter.

The value which, on the ground of my own clinical observations and experience, I think should be ascribed directly to the relieving traction of the weight of the viscera, is shown by the view above quoted, which with deliberate intention was prominently set forth in the introductory words of my original article.

To some extent, the action of the inclined plane is dependent on compression, the second complementary factor of typical *Belastungslagerung*. The effect of elevation of the pelvis, alone, is often not sufficiently intense, and the same may be said of compression. But while the inclined plane alone was never the cause of any noticeable deterioration or bad effect of any kind in inflammatory pelvic affections, the same cannot be said of compression. Indeed, as has already been mentioned, compression by itself is as a matter of fact now and then directly injurious. When used alone it has, in several cases, caused severe pains, which were immediately relieved as soon as the simultaneous use of the inclined plane was prescribed.

It is the observation of cases in practice that has established the different therapeutical value of the two factors, and demonstrated, with absolute certainty, that each is complementary to the other. Whether this can be explained theoretically or not, is of no consequence. The merits of any therapeutical method depend on its results. All that sound empiricism has gained for us is of permanent value. I must, however, confess that in this instance I do not find the slightest difficulty in reconciling theory and practice most happily and harmoniously. The matter is not one that requires any argument. Everyone in surgical practice, or who has had experience in surgical wards, is well aware that in simple elevation of the part we have a most effective antiphlogistic method of treatment, and that this effect is greatly increased when compression (bandaging) is associated with the elevation. The method is in daily use in practice. Why should it not be so also in pelvic affections?

The analogy to an elevated extremity, drawn by the author, is accepted by Wolff in his dissertation (*l. c.*, s. 36) as appropriate. Funke objects that one cannot suspend the pelvis as one can an extremity; that is quite true, and in Danzig we never attempted to do so; yet, though the elevation employed has been quite a moderate one, the

results have been remarkably good. Suspension, therefore, is quite unnecessary, and the unnecessary is to be avoided.

Compression is used in two forms: external, through the abdominal walls, and internal, that is intravaginal; it is most effective when both forms can be used at the same time. Either form may be used continuously, or intermittently.

Intravaginal compression, used alone, is a valuable means of cure, and more so than external compression, as during the latter symptoms of congestion in the depressed abdominal and pelvic viscera are not unusual. This may be ascertained by direct examination. It follows directly, that compression through the abdominal walls can only be employed with real benefit when there is from the vagina an opposing force to serve partly in compressing, partly in elevating and fixing the organs. As will be shown, the indications for elevation of the pelvis and immobility of the organs on the one hand, and for intravaginal pressure on the other, are not altogether the same.

In subacute stages, the compression should be external only (possibly with an ice-bag) and is essentially more effective when applied to the patient on an inclined plane (15 to 25 cm. elevation). Peritoneal irritability is a valid contraindication. Moreover, the compression must be intermittent and is not suitable unless it diminishes both fever and pain, a condition suspended at the first trial.

In the chronic stages of disease, compression, whether external, or intravaginal, may be continuous if the patient remains free from pain and fever. Should pain or any rise of temperature (evening) occur, the compression must be intermittent. Great caution and careful observation is then indispensable, so as to avoid exacerbations. Slight rises in temperature do not necessarily forbid compression; pain is of more importance, but even in the chronic stage, the occurrence of both pain and fever is a contraindication. There is then certainly some focus of suppuration which demands milder measures (never massage). In the first

instance, warm poultices and the inclined plane will be beneficial, without compression.

If on renewed application of the typical Belastungslagerung no improvement should occur, it is well to inform the patient's relatives that the course of the disease will probably be very protracted, and, if the patient at the same time loses strength, an incision must be made, and the suppurating focus sought by blunt dissection and opened as freely as possible in all directions by digital pressure; this applies, however chronic the case may be.

Abdominal compression is obtained by a shot bag, (Auvard XIV.), from 1 to 5 kilos in weight, or by from 2 to 5 kilos of damp potters' clay. Many women bear the damp clay (*pelite=Thon=clay*) much better than the shot bag, and for this reason the minimum weight is put at 2 kilos. It is probable that there is some simultaneous beneficial effect from the moisture and perhaps also some chemical irritation of the skin. In any case the use of shot or clay is to be preferred to that of sand bags, and also to compression with stones, such as used to be frequently prescribed. Compression with bags of stones is often beneficial in constipation (XXV.). The extreme weight of 5 kilos is seldom necessary.

For intravaginal compression the author formerly made most use of the shot bag. The bags were made of iodoform gauze, with a lumen larger than that of the completely dilated vagina. They were introduced into the vagina by means of a short cylindrical speculum while the woman's pelvis was elevated, and from 500 to 800 grammes of shot was poured into the bag while the speculum was slowly withdrawn. The bag was then tied up and pushed in as deep as possible, so that only the string protruded. The grains of shot exercised their effect in the vagina unrestrained by the gauze, for the gauze capsule accommodated itself to the walls in every direction, and was only intended to facilitate the removal of the shot. The shot really lay almost free in the vagina, and could be easily removed at any time, even by the patient herself. Indeed, the patient did as a rule remove it,

for as soon as it had been ascertained that the treatment could be carried out without danger, the compression was generally applied in the patient's own house or in a private hospital. Of course, unwearied pains were taken in giving exact directions; above all, the patient or nurse was most carefully instructed to remove the shot directly the compression gave rise to pain, or to any increase of existing discomfort. The temperature (evening) was always taken most systematically, and compression was never applied during the menstrual period.

Freund's method of intravaginal shot compression by means of a special condom, was thoroughly tested in practice, and the more so because, *à priori*, it seemed better than my own, but it was not found to be so in application. Though very convenient, the method has serious practical disadvantages. There is great uncertainty in the use of a condom, and constant trouble from its rupture. However careful, however expert one may be, just when least expected the rubber bag breaks. You may perhaps carry the matter through successfully ten or a dozen times, and yet in the next two the bag will break. Is that so serious? Indeed, in private practice it is a ticklish matter. In itself of no great importance, it causes both doctor and patient a certain annoyance, and the peculiarities of nervous women must not be forgotten. With innate instinct, the patient at once notices that something strange has occurred; no doubt many a young colleague has gained some reputation by a novelty, but if, when such an accident happens, the doctor has not a plausible story ready, the nervous woman loses confidence, and will not allow him to make any more experiments with her. This is worth consideration, for it is taken from cases which have occurred. This particular method, however, has merely a theoretical interest, for as regards intravaginal compression, the use of shot has been altogether abandoned for that of quicksilver, as suggested by Schauta (*v. Halban*).

I no longer use the gauze bag myself, and the last time

I employed Freund's method it was upon the wife of a colleague to whom I wished to demonstrate it; the rubber bag broke, and the colleague was shown that this application was by no means a perfect one.

The introduction of quicksilver for compression by Schauta and Halban was a great improvement. Its use is more convenient and sure, and its therapeutic effect more uniform and intense. That is apparent, *à priori*. Halban (*l. c.*, p. 132) ascertained by experiment on the cadaver that, under similar circumstances, more powerful effects can be got with quicksilver, because, in the first place, we can use a greater weight (1,000:600), and secondly, because the quicksilver adapts itself to the form of the vagina even better than the shot. In a cadaver with open abdomen, it appeared that "the vaginal vault was more completely distended and tensely stretched, and the uterus more forcibly elevated than was the case when the shot bag was employed."

I do not see, however, that there is any distinction in principle to be drawn between the use of shot and that of quicksilver for producing compression. If an examination be made directly after the withdrawal of the condom or colpeurynter, it is at once apparent that there has been a direct pressure upon the exudate, but that the chief amount of the compressing agent, as is quite natural, has found its way into the parts where it encounters least resistance, in the manner already alluded to.

In the appendix of case histories the author had described many instructive examples of intravaginal compression with shot, and the critical review showed that this method of compression, though it must be admitted to be very efficacious, was only suitable for certain definite affections. It was pointed out in particular that a fundamental distinction must be drawn between compression with the shot bag and the use of the air pessary, which was described in detail in the text. This distinction of course holds in regard also to the use of quicksilver, though the action of the latter is more intense.

Before discussing the use of quicksilver a few necessary words must be said about the air pessary, the colpeurynter and Staffel-tamponade, which are therapeutical factors of nearly equal value. Staffel-tamponade was the name I gave to a certain modification of my own, of the original columnisation devised by Bozeman (XXII.)¹. I had often noticed in practice, that in the chronic stages of inflammatory exudative pelvic affections women could be protected from relapse with much greater certainty if, before they got up, an elastic binder was applied round the abdomen, and one of Gariel's air pessaries, or a colpeurynter, was introduced into the vagina.²

The binder exercised a beneficent compression, and to some extent exonerated the uterus and its adnexa from intra-abdominal pressure, and the support introduced into the vagina gave some relief to the affected organs by placing them in a position of elevation and absolute rest. The therapeutical value of this treatment is generally acknowledged, and, as regards cases of this particular kind, admitted by Halban (*l. c.*, p. 135), Steffek, Broese (XXVIII.), and others. No one can contend that there is any serious difficulty in the theoretical explanation of its indubitable practical benefit in these cases.

As will be presently explained, the technique in regard to the air pessary is, now that the quicksilver air colpeurynter has been devised, different from what it was three years ago.

¹ Although the air colpeurynter (Gariel's air pessary) is fitted chiefly for the fixation of the organs, it cannot be denied that it exercises a certain amount of compression. Accordingly, all cases treated with Mirtle's apparatus for the vaginal application of heat (Manswetoff, XI.), and Pflanz (XXVII.), must be controlled by adequate recognition of the effect of the colpeurynter, as Schauta has very properly pointed out (*Zentralb. f. Gyn.*, 1892, No. 42). von Erlach (*l. c.*, 1) endeavoured, indeed, to utilise this effect directly, inasmuch as he used the colpeurynter under high pressure, a proceeding that, *à priori*, was commendable. See also Foges (XXXIII.).

² Fuller details of plugging or columning the vagina will be found in Pozzi, N.S.S., vol. i., p. 98.

The technique of the Staffel-tamponade is unchanged. Its action is often more prompt than that of the air pessary, for the pressure is exercised all round it and more energetically. It is particularly useful when the air pessary cannot be borne. This tamponade elevates the uterus, relieves the ligaments, and lessens the passive hyperæmia, in short, has an eminently antiphlogistic action.

It is not desirable to use the knee-elbow position recommended by Bozeman. This position is most distressing to the modesty of women, especially when, as here, the treatment has to be carried out with the aid of sight. The elevated pelvis position is just as convenient, but it is then desirable to use a short cylindrical speculum. The modification which I call Staffel-tamponade is carried out as follows :—

The vagina, after careful disinfection and drying out is firmly plugged with dry sterile material (strips of gauze 5 cm. broad and 80 cm. long and Walcher's woodwool) introduced by successive steps or layers.

Especial care must be taken to make the pressure in the vaginal vault, especially in the neighbourhood of Frankenhæuser's cervical ganglion, not only tolerably firm, but uniform; for this large complex of ganglionic cells is undoubtedly the cumulative centre for the whole of the female organs of generation, from which, as numerous researches on this particular point have shown, beneficial influence may be exerted on the circulation, and on subjective impressions of pain, in the pelvis.

This modification has the advantage that the tampon has not to be removed so often, as in consequence of the dryness of the material used, the remarkable power of absorption of the woodwool, and its being absolutely free from bacteria, maceration of the vaginal mucous membrane is, as far as possible, prevented. This maceration is a very inconvenient trouble when glycerine and such like applications are used, as was formerly recommended by Auvard (xxviii.) and others.

If, nevertheless, maceration should occur in sensitive women, the process must be carried out intermittently, in suitable cases, alternately with massage or other treatment. If the tubes are thickened to any considerable extent, or swollen in the form of tumours, Staffel-tamponade, unless it is absolutely painless, is out of place.

This contraindication however, must be further restricted. It is absolutely necessary, at all events in inflammatory affections, that after the first application the patients should repose for about twenty-four hours on the inclined plane. This in regard to Staffel-tamponade may be considered an equivalent factor, since plugging is merely a complementary, though important, element of the typical method of compression-position.

If in spite of apparently correct indications, and repose on the inclined plane, on the insertion of the Staffel-tamponade in the proper way pains do come on, or existing pains are increased, the proceeding is contraindicated. It is therefore well in painful affections to simplify matters by first introducing an air colpeurynter as a test. The expression "Staffel-tamponade" has met with approval in the writings of Halban, Wolff and others. The particular modification of Bozeman's "Columning" above described, should therefore be so designated.

The effect of the Staffel-tamponade is increased and strengthened by the inclined plane, but it is by no means necessary, nor indeed desirable, that the patients should be always lying down on it. In all cases its use should be intermittent, and in very many may be limited to the night. In other respects, in the interests of the patient, the treatment should and must be undertaken while they are going about.

It will be well for me to define here my views in regard to the ambulatory treatment of chronic inflammatory, especially of exudative, pelvic affections. As may be seen from what has been already said, they may be divided into two essentially different groups: first, those inflam-

matory and especially exudative affections which extend to or lie near the pelvic floor and require resorbent treatment; that is to say, parametric exudations, hæmorrhagic cellulitis, exudations in Douglas' pouch and the like, and all cases of disease of the adnexa and pelvic peritoneum in which it can be determined without difficulty that the organs are low down. All these conditions are accessible to intravaginal compression proper, that is to say, that pressure can be so applied in the vagina that it will actually work as compression, while any external pressure will serve rather as an adjuvant. During the application of the intravaginal pressure *the patient must lie down*.

In the second group, the diseases of the adnexa and pelvic peritoneum other than those just mentioned, the organs, or the mass containing them, lie, so to speak, in the normal position; they are less accessible from below and spread themselves in the plane of the pelvic inlet, or even further into the abdominal cavity and, commonly, there are adhesions to the upper margin of the pelvis (ovarian), to the bowel, the fundus uteri or elsewhere.

It is difficult and sometimes quite impossible to deal with the conditions in the second group by intravaginal compression proper. Pressure may be applied in the vagina in these cases also, but cannot be considered as true compression. All that in general can be obtained is a position of rest and elevation for the diseased organs, a relief, a diminution of the *fluxional* congestive hyperæmia and such-like. The *true* "compression" is exercised from outside through the abdominal walls. Apart from the inclined plane, external pressure is the essential therapeutical agent, while the opposing object inserted in the vagina fulfils the part of adjuvant. When in these cases the compression from outside can be obtained by elastic bandages, adhesive plaster and such-like, *ambulatory treatment* may be successfully adopted.

This has been overlooked even by Funke, for after his quotation from the *Festschrift* describing my method, he

questions whether directly or soon after the termination of an acute exudative process in the pelvis the woman could be allowed to get up without any danger of a relapse. Now on the previous page I had been writing about the intravaginal pressure with the shot bag. My exposition had become deficient in clearness, simply from the omission of the case histories.

From what has been said it is evident that, from the first trials of compression-position, a fundamental distinction was drawn as to the mode of action of compression in the two groups of diseases just described. The trials were always made under the guidance of this distinction, and as the theoretical deductive conclusions were confirmed by the informing exigencies of practice, the path of treatment became clearly outlined.

It was of deliberate purpose and by no means an accident that the use of the shot bag was described in detail in connection with the parametric and perimetric affections of childbed, inasmuch as it is in these and similar conditions that intravaginal compression not only appears to be theoretically rational, but has proved to be especially successful. For this reason also the words, "especially the exudative," were, perhaps with unnecessary intention, added in the title of the *Festschrift*.

The fundamental principles and the practical results I have related have been confirmed in many quarters; I need only point to the writings of Halban, and to the discussion in the Berlin Obstetrical and Gynæcological Society (x.).

Belastungslagerung, therefore, meets all the demands of practice. It is not a competitor with compression by means of the shot bag (Freund, Pincus) or quicksilver (Schauta, Halban), but claims and utilises both these proceedings as integral parts of itself of remarkable complementary significance.

In the other component parts of this method (air pessary, *Staffel-tamponade*), we have means and ways which will

most effectually subdue the exacerbations always imminent in adnexal disease, and likely to supervene upon compression, provided they do not depend directly upon existing foci of suppuration. Workable ways are thus available to set upon their legs more quickly the women suffering from these tedious adnexal affections, graves of the joy of existence and the happiness of home, and till now so refractory to conservative treatment, without eliciting the sudden thunderbolts of relapse. This has been rendered possible simply and solely, as numerous parallel observations in practice have shown with certainty, by the therapeutical measures described in detail in the *Festschrift*.

Attention must be drawn to another point of fundamental importance which as yet has not been considered, or even mentioned, by any author. It is that the compression should be not only applied, but also relaxed, gradually. With this postulate this method, though built up on empiricism, assumes a true scientific form; it becomes more sympathetic and satisfactory to medical men with logical ideas.

As a necessary consequence of this advance the technical side of the method has also had to take on a scientific dress. An apparatus had to be provided enabling us to apply the compression, and also to conduct the relaxation by degrees and with exact control, so that the shocks, which seemed otherwise unavoidable, and only too well calculated to induce aggravations in the objective and subjective sufferings of the patients, would be avoided, or at all events reduced to the minimum.

There can be no doubt that compression is followed by an increased and more rapid resorption of pus, &c., (*Fritsch* viii., S. 470), and that the reactive fluxion after irregular and sudden relaxation, induces an abnormal absorption of stirrers up of inflammation.

Both these statements are theoretically sound and both are supported by practical observations. By gradually relaxing the compression we have been able to employ the

method with the happiest results in conditions in which it would have appeared impossible and contraindicated if, as formerly, and without regard to the inevitable, and indeed in many ways desirable, reaction, the relaxation was to be carried out forthwith, and the patients, each time they submitted to the method in the out-patient department, were to be sent home without any safeguard. The reactive fluxion is certainly very desirable and to be utilised as much as possible, but must not be allowed to escape from medical control, without which the harmless ambulatory treatment of chronic exudative pelvic affections which is such a desideratum, cannot be ensured.

The apparatus suggested by Funke (vi.), a combination of two colpeurynters, does not meet the case. The admitted practical want and the technical demands it implies may, the author hopes, be satisfied in a simple way by

THE QUICKSILVER AIR COLPEURYNTER.¹

By the use of this instrument the method of Belastungslagerung should obtain more rapidly than hitherto general acceptance among my gynæcological colleagues and the recently educated practitioners, inasmuch as it makes the method more scientific, and doubtless more safe in application.

The hollow glass sphere (*a*) intended for the temporary reception of the quicksilver, and graduated for from 100 to 500 grammes of mercury, is provided with 4 hollow projections, each 2 cm. long (*b*), which are allowed for in the graduation, and each of these projections is inserted into short rubber tubes (*c*), which again are connected with short 4 cm. glass tubes (*d*) with rounded edges, over which the tubes of the colpeurynters (*f* and *g*) and the air bag (*h*) can be drawn. The fourth projecting glass tube (*v*) has an open mouth acting as a valve. Each rubber tube (*c*) is fitted with a spring clamp (*e*) which can be set tight. There is a fifth

¹ To be had from Hahn and Loechel, Danzig.

clamp on the pipe of the colpeurynter (*f*), which is designed to hold 1,000 to 1,500 grammes of quicksilver.

Before the induction of the intravaginal compression, the rectum and bladder should have been emptied, and the patient invariably placed upon the inclined plane. The woman, lying with her legs drawn up, the valve is opened

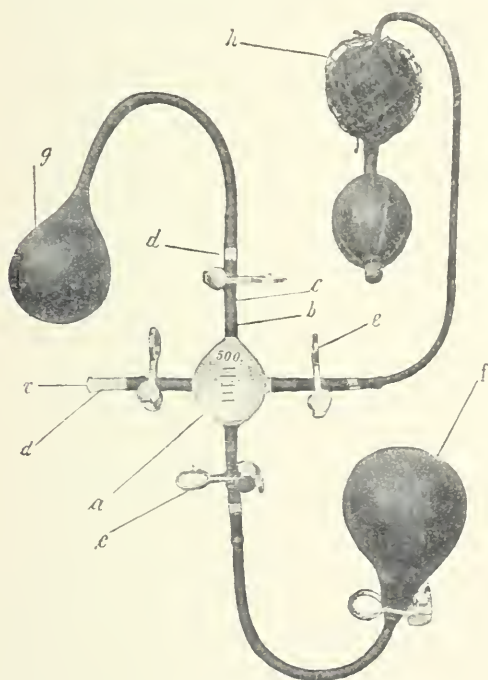


FIG. 2.

and the colpeurynter (*g*) emptied of air and by means of a short cylindrical speculum or colpeurynter forceps, is introduced as high as possible into the vagina, which has been carefully disinfected beforehand. All the clamps are then closed up to the ones leading to *f*. A chosen quantity of quicksilver, not exceeding 500 grammes, is then admitted from *f* into the glass sphere (*a*), and after the suitable

clamps are loosened this amount of mercury is emptied into the colpeurynter (*g*). In this way one can, either slowly or quickly as may be desired, fill the colpeurynter (*g*) with 800, 1,000, 1,200 grammes of quicksilver, or even more if necessary, but that is rarely so.

The emptying of the colpeurynter, when undertaken, is also done gradually, but in order not to submit the patient at once to the uncontrolled effect of the reactive fluxion from the diminished pressure, after emptying out all or part of the quicksilver, one must open the clamp belonging to (*h*) and blow up the colpeurynter (*g*) with air from (*h*) ; any annoyance to the woman is thus absolutely prevented. Until one has had some practice in the method, it is well to control the injection of air by a finger in the vagina, because, just as with the water colpeurynter, vaginal lacerations may be caused by pumping in air in too great quantity, or still more easily by doing it too rapidly. With the finger in the vagina all danger can be avoided, so long as one remembers the principle that a pessary is too large unless the examining finger can easily pass between it and the vaginal wall. If the distended air bag causes any distress or pain it is only necessary to open the air valve (*v*) a little. In general it is better to introduce the air quite gradually, for the reactive fluxion in itself is desirable.

A point of fundamental importance in the ambulatory treatment of exudative pelvic affections is that the colpeurynter, after it has been closed by the clamp (*e*) should be detached from the glass sphere, and secured upwards to some part of the woman's dress before she is allowed to go home. One must not neglect to impress upon each individual patient the precautionary rule, that in case of pain coming on, the clamp is to be somewhat loosened, but the woman should be on the inclined plane when this is done, otherwise the pressure from above will be too strong, and the air will escape too quickly and too completely.

In all these cases it is well to keep the abdomen as far as possible at rest, and lessen the intra-abdominal pressure

on the pelvic viscera by elastic bandages. In private practice it is of course desirable to prescribe a colpeurynter for each patient [for many women are "sensitive" when they reflect at home that other women have worn the same instrument]. The colpeurynters fitted to the apparatus are the most suitable in size and resistance, and the air pump also is adapted to what is required.

Many women will wear the moderately distended air colpeurynter till the next day when the compression with quicksilver is to be repeated. In that case it is not necessary to remove it. In many others the bag has to be removed by the patient at home after it has been worn for some hours. It must then be cleansed with soap and brush and sublimate, and kept in a 2 per cent. lysol solution. If the bag has remained in sublimate it must, of course, be washed in sterile soda solution, or in sensitive women it may cause symptoms of irritation in the vagina (burnings, and such like).

The little apparatus may be used in a different way. For instance, if another colpeurynter (*k*) be fitted at (*v*), [or if (*f*) be emptied in the first place], one may, after loosening the corresponding clamps, blow up *f* and *g* (or *k* and *g*) at the same time. Then, after stopping off the air pump (*h*) by squeezing and relaxing *f* (or *k*) one may institute with (*g*) an intravaginal massage which has a beneficial effect on the tone of the walls and immediate surroundings of the vagina, and this massage can be practised for any time desirable without the least inconvenience to the woman. The colpeurynters, however, should be only a little more than half full. This proceeding may be appropriately termed colpeurynter massage, and is a new suggestion, at least, as far as I can discover, nothing of the kind has yet been described in the literature. The indications for it have been discussed in the *Zentralblatt* (XLII.), and must therefore find mention here. The method must be further tested, and within certain limitations will be appreciated as a welcome addition to the therapeutical measures available hitherto.

The various technical and mechanical precepts and instructions above given by no means completely describe the method. The importance of careful nourishment, and systematic respiration gymnastics must still be insisted upon as indispensable and integral components of Belastungs-lagerung, without which it cannot be recognised as typical. By these complementary factors the forces of Nature are mobilised for our objects, and none more effective to promote resorption could be imagined.

It is absolutely necessary that the *paniculus adiposus* of the pelvic viscera should be effectually preserved by prophylaxis. It is therefore necessary, *à priori*, to pay great attention to the general condition. The fat packing in the pelvis is no mere storehouse of superfluous fuel, but is wanted to keep the organs in their natural position, to act as a protection and mutual support. When it has perished from long confinement to bed, one must endeavour to restore it as quickly as possible by such hypernutrition as is administered in the Weir-Mitchell treatment.

Finally, that an improvement in the circulation goes hand in hand with the increase in bodily powers, requires no argument, and no well-educated physician would require proof that an energetic circulation is of importance for resorption.

For this reason, even in the *Festschrift*, attention was specially directed to the utilisation of the exhaustive effect of respiration by methodical respiratory gymnastics. Slow forcible inspiration through the nose is all that is necessary, but this must be practised systematically and regularly, from ten to twenty times every hour. In private practice, these respiratory gymnastics are the more important because most of the women wear tight stays, and they offer the only possible method of successfully increasing the capacity of the thorax. A rapid balance is obtained in the differential pressure of the arterial and venous system. While the arterial pressure is raised the venous is diminished and the lymph stream is accelerated, a valuable preliminary for the desirable resorp-

tion. And since the variations in the blood pressure caused by respiration, not in the arteries only, but in the veins and even in the lymphatics also, are greatest in the vessels in and near the thoracic region, and their limits are in proportion to the intensity of the breathing, not even theoretically can any doubt be raised as to these recommendations being wise and necessary.

Method in these exercises is very important, as without it the heart cannot adapt itself to the increased work thrown upon it. Isolated forcible inspirations are detrimental rather than improving to the cardiac function. If anæmia be present, but only to a moderate extent, the inclined plane alone will prove efficient, but if the anæmia be extreme one must also try to improve the circulation in a purely mechanical way by hypodermoklysis, or perhaps clysters.

Finally, it must be remembered that one-sidedness, as well as generalisation, is to be avoided. In many cases the permanent success of *Belastungslagerung* is only secured when the method is combined with other measures; hot irrigation, in the excellent way recommended by Stratz (xxix.) peat baths, hot sand baths, advised by v. Winckel (xxx.), and such like. In many women, though the continued use of the method is well borne, its intermittent employment has a better effect. This agrees with Halban's experience that a long course of the treatment is not always more effective than a shorter one. Massage is not indicated unless movable organs are cemented together (ovaries and tubes). One must individualise and carefully watch the cases and so get a true diagnosis.

My investigations in connection with compression-methods were not perhaps originally due to any very noticeable gaps in our available means of treatment, but were instituted rather upon diagnostic grounds, because in these particular cases it must always be desirable for the beginner to avoid, as far as possible, the use of narcosis merely for diagnostic purposes. This was mentioned in the *Festschrift*, but it is

to be understood that afterwards, in the exposition of this new method of treatment, the therapeutical moment prevailed.

Yet the more the author has to do with this method the more is he impressed with its practical value in diagnosis. At Munich the time limit on the speakers was absolute, and I confined myself to merely mentioning the advantages of the method in this respect; but these very advantages merit the special consideration of specialists and practitioners, and would materially promote the general acceptance of the method.

Freund, in his own report of his address at Brunswick (see also in the *Proceedings*, xxxi.), made no allusion to the value of the method in diagnosis, and when the *Festschrift* appeared nothing further had been published, though Funke soon afterwards made some contributions on the subject, and Halban also. In the discussion at Aix of Fritsch's address "On Vaginal Cœliotomies," W. A. Freund characterised the compression treatment as *an aid to diagnosis for which there was no substitute*. We should, therefore, endeavour to secure that in every case before and with the employment of this method for therapeutical purposes, it should also, and previously, be utilised for diagnosis. It may therefore be permissible to add a few fundamental diagnostic rules, which are the result of practical experience, and promise to be useful.

It is the duty of every practitioner to avoid all that is useless, especially any proceedings not free from danger.¹ Narcosis merely for diagnostic purposes, therefore, should never be employed unless it is actually indispensable, or unless as I recently pointed out (xxxiv.), the diagnosis in any case must necessarily be followed by an immediate operation (xxxiv.).

On leaving hospital work a man is too apt to carry out the

¹ Cf. Borntraeger's Classical work: "On the Criminal Responsibility of the Physician in the Use of Chloroform, &c." Berlin: 1892.

things that he has seen there in private practice ; but there is a fundamental difference between hospital and private practice, and especially so in regard to the necessity or propriety of narcosis for diagnostic purposes. This distinction should be more prominently set forth, as it was constantly by v. Winckel in Dresden, so that physicians attending hospital practice should take it to heart.

In hospitals didactic teaching is appropriate. The students have to be prepared for their profession, and in general for the first time be taught to know how to make an examination. The morbid condition must be felt not only thoroughly, but as quickly, and by as many persons, as possible. In hunting haste one instructive case follows another, and it is the duty of the superintending clinical teacher to utilise to the utmost possibility, for the purpose of education, all the material at his command. The object of hospital study is to wake up the power of combination, to call out and form the capability of the student to come to a decision. The power of combination is only acquired after frequent observation, palpation and recognition.

Furthermore, in hospitals the patients come from classes whose only wealth is represented by good health and capability for work. The women submitted to examination and observation wish, and are obliged, to be capable of work quickly, or they must from material reasons succumb. In hospital, therefore, important distinctions have to be drawn in a moment, and one must therefore admit that narcosis for diagnostic purposes is directly indicated in various ways ; but in private practice it is very different ; narcosis for diagnostic purposes is only justifiable when threatening symptoms are present or an important distinction in prognosis must be promptly arrived at. One is by no means compelled so to proceed, in every case, that a complete diagnosis may be arrived at on the first examination ; if one were, one would be compelled to use narcosis.

It is much more correct in difficult cases to make repeated examinations ; one can in that way proceed much

more cautiously and obtain much more information without doing any harm. By comparing with one another the conditions found on two or three successive days, one may, by combining the results, learn just as much as by a forceful examination under narcosis. Of course there is little use in saying that narcosis should not be so often employed. He who condemns it must offer something better, or he will not be listened to; for who can deny that there is a much felt and well recognised want. The substitute for narcosis, however, is in many respects provided by the typical method of Belastungslagerung (XXXIV).

In Germany we have two excellent text-books on Gynaecological Diagnosis, Winter's (XXXV.) and Veit's (XXXVI.). Each has had a large circulation, and each in the happiest way supplements the other.

Too much importance is still attached in family practice to chronic parametritis. "Under this collective expression all sorts of affections, inflammations, callosities and exudations in the parametrium, inflammations and exudations in the peritoneum, perisalpingitis, perioöphoritis; tubal tumours are very often included (I.)."

In Strassburg Funke's experience was much the same, he writes (*l. c.*, p. 269): "Examiners without experience wrongly refer to the parametrium both acute and chronic affections the localisation of which they are unable to determine exactly."

This circumstance is important inasmuch as Belastungslagerung can only be recommended, generally, on the supposition that the differential diagnosis, especially as regards the tubes, has been most carefully established; moreover, exact observation, including the taking of the temperature, must be guaranteed in every case.

The extreme importance of an exact anamnesis, in regard to diagnosis, must not be disregarded. From a careful case history one may often get more valuable hints than from a thorough combined examination. If, for instance, it is recorded that an exudation occurred in,

or in immediate connection with, child-bed, and if from the symptoms and data given septic endometritis and gonorrhœa can be excluded in the great majority of cases, one may take it for granted, *à priori*, that one has to deal with an exudate in the parametrium, at all events with one in which the perimetrium, if affected, is only so secondarily.

On the other hand, if there has been no child-bed, or only one absolutely normal and free from fever, or if the exudate is to all appearances entirely independent of puerpery, perhaps occurring many years after anything of the kind, and if, also, it is known that no gynæcological operations have been performed, one may then suppose that the exudation has its seat in the pelvic peritoneum.

I have invariably found it well to attach importance to such fundamental differences. Every differential characteristic must be given its full value in the history. Above all the anamnesis should show whether relapses or exacerbations have been of frequent occurrence and whether the inflammation has been in any way of a remittent character, for if so one has generally to deal with pelio-peritonitic processes, or with tubal affections. Parametritis seldom takes this course, but is chronic and tedious, with the formation of abscesses. As Kuestner well says (xxxvii.): "Infiltrations low down in the pelvis are generally phlegmons of the connective tissue; those lying near the uterus in the pelvic inlet are generally connected with the tubes or ovaries; an exudate palpable behind the uterus and extending towards one side, is generally connected with the tube, ovary, or pelvic peritoneum."

Even with the constant aid of narcosis, an exact and complete diagnosis in every single case, as Fritsch (xxxviii.) puts it very appositely, is only to be established by a diagnostician at once optimistic and fanciful.

It is often very difficult in nervous hysterical women, in whom examination causes much pain, to arrive at any definite conclusions. In such cases the uterine elevator I devised and originally used for the purpose of gynæ-

cological massage in order to lift the uterus upwards and forwards (Luftungen) (*v. Archiv f. Gyn.*, Bd. xiii., p. 456) has proved very useful.

The cup-shaped extremity, which is screwed on, and is made in various shapes and sizes, is introduced like a speculum, and after it has received the portio vaginalis under the guidance of the fingers, the straps through the movable lateral branches are passed below the woman's thighs and gradually drawn upwards by the patient herself.

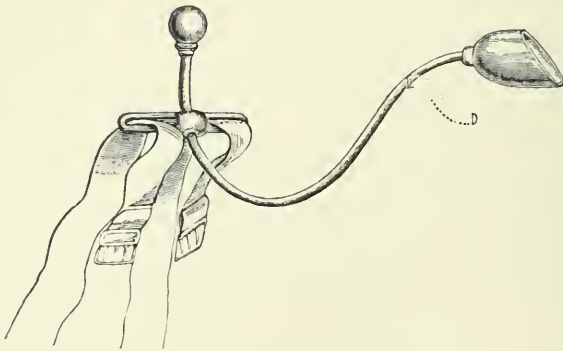


FIG. 3.

The convexity of the lower curve of the instrument is then guided and supported on the perineum, so that the uterus is raised directly upwards and forwards right against the abdominal wall. The uterus is then accessible for massage. The dotted lines show how in special cases an interposed crook may be used to give a different direction to the cup.

If the patient is entrusted with the instrument there need be no further anxiety, and one can ascertain with perfect certainty whether pains on ballottement are of nervous origin or otherwise.

Proceeding on the diagnostic principles just set forth, which are founded on sound clinical and anatomical facts, and utilising all the advantages given by the method of *Belastungslagerung*, in the majority of cases it will not be

difficult, even without narcosis, to form a clear opinion upon the nature of the affection and its prognosis. It is quite wonderful to what a high degree combined examination is simplified by Belastungslagerung. The difference is particularly striking in young women with rigid abdominal walls, especially when such persons are anxious and nervous.

The reason the difference is so great in nervous women is because the reflex spasm of the abdominal wall, which is so easily induced in such persons, is excluded by the compression. For this particular object, especially in hysterical women with hyperæsthetic zones of the abdominal wall and hyperæsthesia of nerve trunks, compression with moist clay acts even better than with shot.

In hysterical, erethismic and erotic women, the application of cocain to the vestibulum vaginæ before each internal examination, an artifice already described in the *Archiv* (XXV.), has proved useful.

Cocainisation, desirable in young persons and those that are nervous, is indispensable in the erotic and hysterical. Of course the patient is not to be told the object of the solution, indeed it is best if her attention is not drawn to it at all. It not only prevents excessive sensations, but also, to a great extent, the reflex spasm of the abdominal muscles.

The shot bag or clay is not removed during the examination. The vaginal examination is easier if the pressure from above is maintained. By gentle palpation—not with rustic hands—one then often feels as distinctly as during narcosis, and one learns more, because the configuration of the tumours is not infrequently made clearer and more definite by the more prolonged compression. Repeated narcosis for diagnostic purposes is seldom beneficial, but the repetition of Belastungslagerung is much to be recommended. In a favourable case repetition of narcosis may do no harm, but repeated compression for diagnostic purposes will, in the majority of cases, do good. If after repeated compression, as usually is the case, the

diagnosis becomes more exact and instructive, this often signifies only that resorption has been actively going on.

I can now from additional experience confirm my original statement that "So long as the general mass of the adnexal tumours has not assumed any definite form, we should abstain, on principle, from narcosis." This of course refers to private practice only. The treatment in the beginning remains, generally, the same. If under it any shrinking has taken place, one can in almost all cases easily determine the nature of the disease."

When, owing to some vaginismus, the introduction of a speculum is difficult, if the point of the speculum is introduced into the cocainised introitus a little beyond the protuberance of the levator, and the patient is then told to give a strong cough, the instrument will slip in almost of itself. This method is also very useful in virgins if the point be passed beyond the lower edge of the hymen, and pressed somewhat backwards towards the rectum.

External compression, and, *mutatis mutandis*, as regards facilitating the examination of a case, the same may be said of intravaginal compression, acts not merely by greatly relaxing the abdominal walls, but also by very materially diminishing sensibility. On this point there can be no doubt. Anyone who takes the trouble to test it will assuredly confirm my observations and remarks.

(*To be continued.*)

REVIEWS.

HANDBUCH DER GEBURTSHUELFE. In drei Baenden herausgegeben, von F. WINCKEL, in Muenchen. Erster Band II., Haelfte, mit zahlreichen Abbildungen im Text und auf Tafeln. Large 8vo, pp. x. and 646. Wiesbaden: J. F. Bergmann.

A notice of this very important work appeared in our last volume (p. 357). The second instalment now before us is divided into two parts, dealing respectively with Pregnancy and Labour, as regards their physiology and dietetics, but, especially in regard to multiple pregnancy, it has not been convenient to omit pathological conditions altogether, and the term dietetics, which in the first part includes all regulations for the general conduct of a pregnancy, in the second seems to embrace much more—diagnosis, as well as the entire conduct of labour, including protection of the perineum, and the ligation and division of the cord.

Under the heading of Physiology, F. Skutsch, of Leipsic, describes the investigation and diagnosis of pregnancy, as to its existence, period, and whether it is primary, multiple or otherwise; the size and condition of the fœtus, and the dimensions of the pelvis, &c., &c. Strassmann, of Berlin, treats of multiple pregnancy, and crossing the border line of physiology (twins, triplets) discusses the effect of the death of one (or more) of the embryos on the remainder; oligo- and poly- hydramnion; the circulation of uniovular twins, and acardia. He gives due appreciation to Schatz's work, and among a large number of excellent illustrations, many of them coloured, reproduces some good diagrams from Professor Bumm's "Outlines." "The Dietetics of Preg-

nancy" conclude the first part: von Herff, of Basle, writes on the general care of the pregnant woman, including the treatment of the slighter maladies incidental to her condition, while Bunn contributes a chapter, supplementing, and to some extent overlapping, Sarwey's subsequent remarks, "On the Preparations for Labour."

Four chapters of the second part are from the pen of Oscar Schaeffer of Heidelberg, who deals with the nervous centres of the uterus, the causes determining labour, the expulsive forces and the resistance they have to overcome, and also with the course and stages of labour. Hugo Sellheim, of Freiburg, describes the bony pelvis, its joints and ligaments, the anatomy of the pelvic fasciæ and muscles, including their condition when at rest and during delivery, introducing much from his excellent Atlas (*v. ante*, vol. xix., p. 393).

L. Seitz, of Munich, writes a most interesting chapter on the development of the attitude (*habitus*) and presentation (*situs et positio*) of the foetus, and M. Stumpf, also of Munich, discusses "The Mechanism of Labour," prefixing his work with a list, extending to more than seventeen pages, of publications on the subject more recent than Mueller's "Handbuch" in 1888.

O. Sarwey, of Tuebingen, writes on the Dietetics (Diagnosis and Conduct) of Labour, except as regards the third stage, which is dealt with later by A. O. Lindfors of Upsala. Menge, of Leipsic, undertakes Asepsis and Antisepsis, and holds strongly that in midwifery antisepsis is useless if not harmful, and that for the prophylaxis of puerperal fever we must depend on such asepsis as will exclude infectious germs from the genital canal, and upon such measures as will fortify the resistance, local and general, of the system of the parturient woman to such germs. In the next chapter G. Klein, of Munich, gives an historical sketch of the dependent-leg position (*Hängelage*), and points out that its essential effect was known and appreciated by Albucasis in the 12th century, by Mercurio in the 17th, and by Melli in

the 18th, but it was so ridiculed and neglected that it might be said to be rediscovered by Walcher in 1889. He gives some remarkable pictures from Mercutio and Mulli.

Lindfors, in connection with the third stage, discusses the various methods of dealing with the placenta, and the differences that from time to time took place in the so-called Credé, and in the Dublin method of expression. He himself leans to the milder form of the Dublin method (as described by Byers), and includes the idea of marking the cord off at the vulva by a thread (or small clamp).

Labour in Multiple Pregnancy is undertaken by Strassmann, who here again, as might be expected from the greater liability in such births to faulty positions, prolapse of limbs or of the cord, hæmorrhage, eclampsia, &c., &c., has a good deal to say about pathology.

In a work of this kind by many writers, it is practically impossible to devise and preserve an absolutely systematic arrangement, and to avoid overlapping and repetition, but we have no hesitation in saying that this second instalment of von Winckel's *Handbuch* fully maintains the high standard of the first.

TRATADO DE GINECOLOGIA. Por MIGUEL A. FARGAS, Catedrático de Obstetricia y Ginecología de la Facultad de Medicina de Barcelona; Miembro honorario de la Sociedad de Obstetricia y Ginecología de la Universidad Imperial de Moscou, &c. Ilustrado con gran número de Grabados y Láminas. Large 4to (10 × 7). Fasciculus I., Generalidades. Pp. viii. and 300 (with 174 Illustrations and 8 Plates). Price 9s. 6d. Fasciculus II., Enfermedades de la vulva y vagina. Pp. 301—516 (with 296 Illustrations and 12 Plates). Price 7s. 6d. Salvat y C^a.: Barcelona, 1904.

Though many of the best books on Gynæcology have been translated into Spanish, few original works on the subject have been written in that language. Some years ago Dr. Corolen and Dr. Soler published *Notes of Lectures*

delivered by Professor Fargas, but the work was concise, and since its appearance he has felt impelled to write a treatise on the subject. The present book may indeed be considered as a revised and enlarged second edition of the former set in a didactic form. Professor Fargas has not only his experience in the Chair of Obstetrics and Gynæcology to fit him for writing such a book, but that of twenty years' practice with a *clientèle* of 18,000 patients, and laboratory work in his beautifully installed private hospital, which is fully described and depicted in the first part of this book. He has been a regular attendant at the International Congresses, Berlin, Moscow, Paris, Madrid, and the Special Congresses at Geneva, Amsterdam and Rome, and has visited most of the Gynæcological clinics in Europe and had personal relations with the most distinguished of his colleagues in many countries. His book is to be completed in four parts, and judging from the two before us, while it will not serve a student to cram for examination, it is free from the prolixity that is wearisome to a well-educated reader, and its clear and practical character throughout is the patient outcome of the wide knowledge and practical experience of a strong personality. The illustrations are in great part original, the photographs and microphotographs being the work of Dr. Terrades, the chief of Professor Fargas' laboratory and himself a skilled gynæcological pathologist.

Professor Fargas insists that surgery is more advanced than diagnosis and the study of the indications for treatment; that there has been too great a tendency to improper, premature or excessive intervention, and he holds to the standard of conservatism that he has for ten years set forth in his lectures, his annual reports and his communications to the International Congresses at Moscow, Amsterdam, Rome, and Madrid. He warmly advocates Apostoli's electrical treatment.

The first fasciculus of the work deals with generalities, is, in fact, a general introduction to the study of the Diseases

of Women, including the necessary anatomy, physiology, hygiene, general ætiology and pathogenesis, symptoms, methods and instruments for examination, general and special therapeutics, tonics, specifics, opotherapy, serotherapy, local applications and anæsthesia. Antisepsis and asepsis are thoroughly discussed and evidently thoroughly carried out, the installation of Professor Fargas' clinic, in this respect, being very complete. The first part concludes with the description of vaginal and abdominal operations and the consecutive treatment, and the accidents and complications, prognosis, indications and contraindications for laparotomy.

For the remainder of the work Professor Fargas has chosen the anatomical arrangement, and deals in Part II. with Diseases of the Vulva and Vagina; in Part III. with Diseases of the Uterus; and in Part IV. with Diseases of the Adnexa. This arrangement, though it entails some repetition, has the advantage of being more instructive, and in the first part he has done much to minimise the repetition. The remaining parts, making the second and concluding volume, are promised shortly, and we congratulate Professor Fargas on having given to our Spanish colleagues such an excellent work. To the publishers, Messrs. Salvat y Ca., we offer our cordial compliments on the elegant production of the work as regards paper, type and illustrations.

PROGRESSIVE MEDICINE : A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, &c., &c.; assisted by H. R. M. LANDIS, M.D., Assistant Physician to the Medical Dispensary of the Jefferson Medical College, &c., &c. Vol. iv., December, 1903. Large 8vo, pp. viii. and 444, with Plates and Illustrations, cloth. Price 15s. (annually, 52s.).

This handsome volume is one of a series to which a Grand Prize was awarded at the Paris Exposition 1900.

The list of collaborators, in addition to the names of some of the best known professors in America, includes those of Dr. Rose Bradford, of University College, and Dr. William Ewart, of St. George's Hospital, London, and that of Dr. Logan Turner, of Edinburgh, and in this volume Dr. Rose Bradford undertakes the Diseases of the Kidneys. The other subjects treated of are none of them, except, perhaps, Practical Therapeutics, very directly connected with our Gynæcology and Obstetrics, and it is probably owing to the carelessness of a clerk that the volume sent to us does not deal with these branches of medical science. We have, however, found much pleasure and profit from a study of the book, and incidentally may mention as points worth noting: the use of compresses of alcohol in peritonitis (Ssaweljew); intravenous injections of a solution of adrenalin in surgical shock (Crile), with caution on account of its inhibitory action on the heart; to its use also in profuse uterine hæmorrhage, and to increase the effect of cocain in local anæsthesia. In connection with vaporisation, a steam saw, devised by Koslensko, which checks parenchymatous hæmorrhage as it makes the incision. The occurrence of gangrene after the subcutaneous injection of Tavel's solution—it is apparently better not to add bicarbonate of soda. One death after scopolamine recorded by Blos in 105 cases—the danger is from the morphia, but in six cases the patient was found by the test dose given the previous evening to be a bad subject, and in twenty-nine the supplementary administration of ether was necessary. Spinal anæsthesia is not recommended. The treatment of general infections by intravenous injections of collargol, formalin, or nitrate of silver, seems justifiable in desperate cases; the good effect of saline solutions is beyond doubt. An important article by Patella records good results from the intravenous use of corrosive sublimate in anthrax, carbolic acid in tetanus, cinnamic acid in tuberculosis, and collargol in various affections. Jaenicke reports a case of severe puerperal sepsis treated with collargol.

Four cases of fibroma of the abdominal muscles directly associated with pregnancy are recorded by Fabian. Reflex vesical irritation, according to Hahn, may be caused by, and first draw attention to, uterine myomata, and may indicate operation. Morphia is found to be beneficial in uræmic convulsions, in pregnancy or otherwise, when the nephritis is acute, but is less so, or even dangerous, when the nephritis is chronic. Garsig records the piecemeal extraction through the urethra of a three months' fœtus from the bladder. Harrington and Walker declare that corrosive sublimate is much overrated as a skin disinfectant, and should be abandoned, alcohol (70 per cent.) being much better. Link, in connection with a death caused by the administration of 50 cc. of lysol in an enema, has found by experiments that poisoning depends on the total dose, not on the strength of the solution.

Our notice has been unwillingly delayed ; judging from the present volume we think that this Digest would be a most valuable help to any medical man in keeping abreast with the progress of medical science.

ATLAS AND EPITOME OF OPERATIVE GYNÆCOLOGY. By Dr. OSCAR SCHAEFFER, Privatdozent of Obstetrics and Gynæcology in the University of Heidelberg. Authorised translation from the German, with Editorial Notes and Additions by J. CLARENCE WEBSTER, M.D., F.R.C.P., F.R.S.E., Professor of Obstetrics and Gynæcology in Rush Medical College, &c., &c. Crown 8vo, pp. 138, with 42 Coloured Lithographic Plates and many Text Illustrations, some in Colours. Philadelphia, New York and London : W. B. Saunders and Co. Cloth. Price 13s. net.

This little book is one of the translations of Lehmann's Series of Hand Atlases, which are being issued by Messrs. Saunders. It may be considered a supplement to the "Atlas and Epitome of Gynæcology," which we were able to review so favourably in 1901 (*ante*, vol. xxii., p. 88), but, though less

than half the size, the price is nearly the same, and while the plates on the whole are as good and will win the admiration of even an experienced operator, it is not so with the text. The distinguished editor disclaims any responsibility for the plan or details, and one may almost assume that the notes he has interspersed in brackets were made by him in a German copy, and that he had no opportunity of reading the translation. In the "Atlas and Epitome of Gynæcology," edited by Dr. Richard C. Norris, the name of the translator, Dr. W. Hersey Thomas, was given in the preface, and (*e.g.*, p. 236) he did not hesitate to correct a *lapsus calami* in the original. The translator of this book seems to have been neither an anatomist or gynæcologist, and though no doubt able to read German cannot write good English. One perhaps should justify such a statement. On page 71, "vaginal portion" is used instead of vaginal canal; on page 74, "diverticulum," in itself an improper description, is applied to a portion of the bladder which is not as there stated anatomically "contiguous above" the trigone. The use of the word "atrium" on page 119, cannot be justified, even if transcribed from the original; the only atrium in the genitalia known to English or American gynæcologists is the vestibule. On page 61, "urethra" is substituted for *bladder*, though in the preceding sentence a warning is given against opening the urethra. Kolpocœliotomy is a barbarism that may have been taken from the German original. In the descriptions of figures 16, 20 and 21, "mucous membrane," "in the direction of the incisions," and "forward," are entirely wrong, and a reference given to plate 9 on page 56, should have shown the translator that "in the median line" was not correct. Vaginofixation is sanctioned by use and euphony; if another form of the word had been necessary no educated man would have chosen vaginifixation instead of vaginæfixation, nor have written "urocervical." The amount of the text actually devoted to gynæcological operations is considerably less than 100 pages, and could therefore be merely an epitome; as the German book is

not before us and as no dates are given, we cannot say whether it might have been more up to date than it is. The Editor's notes are brief, and there is hardly one to dissent from. He "emphatically" favours panhysterectomy in cancer of the vaginal portion, and also in infected myomatous uteri; he characterises half a page in regard to the surgery of ectopic gestation as scanty and inexact, as indeed it is, but this subject has been dealt with in the "Atlas of Obstetric Diagnosis and Treatment." It is a great pity that carelessness such as we have shown should detract from the value of the book to the student and practitioner, for the illustrations are excellent both in design and execution.

DER NORMALE SITUS DER ORGANE IM WEIBLICHEN BECKEN UND IHRE HAUEFIGSTEN ENTWICKLUNG-SHEMMUNGEN. Auf sagittalen, queren und frontalen serienschnitten dargestellt von Professor Dr. HUGO SELLHEIM, I., Assistentarzt an der Frauenklinik der Universitaet Freiburg i. B., mit 40 lithographischen Tafeln and 11 Figuren im Texte. Long quarto, 18 by 13.5 inches. J. F. Bergmann, Wiesbaden; F. Bauermeister, Glasgow. Price £3.

We had last year (vol. xviii., p. 393) the pleasure of reviewing a most excellent and laborious work in which Professor Sellheim dealt with the Anatomical Relations of the Muscles of the Female Pelvis when at Rest and during Labour. He had previously published (Giörgi, Leipsic, 1900) an Atlas of the Topographical Anatomy, Normal and Pathological, of the Female Pelvis, in the preparation of which he had been much hampered by the difficulty of obtaining normal specimens. The material for the present work, with the exception of one abnormal case lent by Professor Wiedersheim, has been derived from the Pathological Institute of the German University at Prague, and in gratitude the author has dedicated the work to Professor Hans Chiari, the Director.

The work consists of two parts: in regard to the first, on

the Normal Situation of the Pelvic Viscera, the cases were most carefully selected, and any specimen that, though apparently normal at first, showed after fixation or even after section any considerable deviation therefrom, was rejected.

In the introduction the manner in which the specimens were hardened, and finally, after several months, prepared for section by embedding in celloidin and soaking in alcohol, is given in detail. The sections were made in three dimensions, sagittal, transverse and frontal, in the way originally adopted by Hodge, and employed by Sellheim in his earlier work. Moreover, in regard to the sagittal sections, the pelvis was placed at an angle of 20° to the horizon, corresponding to the position in which examinations are generally made, and many operations performed. In the text (34 pp.) which precedes the plates, the anamnesis, detailed autopsy and *post-mortem* diagnosis of each case is given before the description of the plates taken from it. In the text as well as on the plates the direction of the sections is given by smaller figures, and the study of the plates is greatly facilitated by the position of various parts named on the margin being indicated by pointing lines.

Sellheim claims that while his work corroborates generally the accepted view as to the situation of the pelvic organs, he has by these studies of the anatomy in women who have, and have not, borne children, in both young and old, and with varying conditions as to distension of the bladder and rectum, succeeded in correctly determining the play room allowed to the pelvic viscera under normal conditions. Apart from this the variations in form and position within the normal are exposed in the most instructive way, the extramedian position of the uterus and consequent asymmetry of the adnexa, the effects of the full and empty bladder and rectum, the variety in the relation of the vermiform appendix to the right adnexa, the variable depth of the uterovesical pouch, &c. Moreover, if the course of the ureters be followed in successive plates, one can understand

how in a hysterectomy one of them may not be in any danger while the other can hardly escape injury.

The last ten plates, all instances of deficient development, offer good examples of retroverted infantile uteri, twisted tubes, functionless displaced ovaries, deep Douglas and anti-uterine pouches, a remarkable instance of displacement of the bladder to the right, and of supernumerary folds (transverse, vesical and others) of the peritoneum, incomplete perineum, tuberculosis of the peritoneum, tubes and uterus, &c., &c.

The accurate record and depiction of such laborious, persevering and intelligent research, must aid in the progress of gynæcology. Altogether this work is worthy of Sellheim's established reputation, and has been produced by the publishers in a most excellent manner.

LA GASTRO-ENTEROSTOMIE. Historie générale, Méthodes Opérationes. Les cent cinquante premières opérations de la clinique chirurgicale d'Angers, par A. MONPROFIT, Professeur de Clinique chirurgicale à l'École de Médecine, Chirurgien de l'Hotel-Dieu d'Angers, Membre correspondant de la Société de Chirurgie, Lauréat de l'Institut (Académie des Sciences; Prix Mège, 1903). Large octavo, pp. xvi. and 375, with 300 illustrations. Paris: Institut International de Bibliographie Scientifique, 1903. Price 15 francs.

We are pleased to see a work of this nature from an experienced surgeon who has distinguished himself not only in the field of general surgery but also in gynæcology, for last year the Prix Mège was bestowed upon him for his work on the "Ovaries and Fallopian Tubes" (*Chirurgie des Ovaries et des Trompes*), which was reviewed about eighteen months ago in this Journal (*ante*, vol. xviii., p. 397), and he has also written and published much on the surgery of the female pelvis. To those more particularly concerned with the progress and increasingly satisfactory results of gastro-enterostomy, the book before us will prove most interesting,

and indeed fascinating, because the author writes with all the fervour of an enthusiast.

In the preface he refers to the invasion of the domain of medicine by the surgeon, and to the changes that have already occurred, and that are taking place, in regard to the treatment of chronic affections of the stomach. Too frequently medical measures are resorted to and continued too long, often with the result that the patient's health has so deteriorated and the disease has so much further progressed when surgical aid is ultimately sought, that the delay has robbed both the patient and the operator of the best opportunity of attaining a satisfactory result. Monprofit justly and rationally claims that such cases should be handed over to the surgeon in an early stage, and points out that with increasing knowledge of these affections surgical treatment is happily becoming less and less postponed, and is daily giving better results. We can sympathise with the author, for it is especially in malignant disease that operative treatment is too frequently deferred until the patient is in the worst possible condition for such treatment. He believes that with earlier operative interference, and with the great improvement in operative technique, the operation of gastro-enterostomy will soon be as safe and as easy of performance as that for radical cure of hernia. He confesses to being a confirmed "suturist," and is altogether opposed to the employment of buttons or any mechanical appliance for obtaining anastomosis, and states that good results can only be attained by good operative measures, with which the surgeon must be thoroughly conversant, and that the next most important point for him is to learn to sew rapidly.

The most interesting part of the book relates to his description of the operation which he considers is the nearest approach to the ideal, and that is the posterior implantation method, or "Y operation," as advocated by Roux, where end to end anastomosis is made between the stomach and the jejunum, and at the same time the duodenum is made to anastomose with the jejunum below this junction.

As the impossibility of regurgitation of bile and pancreatic juice into the stomach is practically assured by this method, the restoration of the digestive function takes place at once and the patient's condition begins to improve immediately after operation. Although he has had extensive experience of gastric surgery, he has only practised the modified operation of Roux in some of his recent cases, and in which the trouble was non-malignant, so that undue importance should not be attached to them in comparison with results by other methods. He gives some excellent tables, classifying the cases and operations, and full notes of all patients that come under his care. The immediate and remote results of operative treatment are well dealt with, likewise the after-treatment of these cases, and we are glad to note his recommendation of the early administration of food, as we are convinced that, in the past, as many cases have died from starvation after operation as from faulty technique.

The work on the whole is an excellent text-book, and contains a profusion of descriptive and useful illustrations. Each chapter is well written, and that which particularly deals with the various methods of performing gastro-enterostomy is so descriptive and so full of details that it cannot fail to be of the greatest value as a reference.

PRACTICAL GYNÆCOLOGY, A COMPREHENSIVE BOOK FOR STUDENTS AND PHYSICIANS. By G. G. MONTGOMERY, M.D., LL.D., Professor of Gynæcology Jefferson Medical College; Gynæcologist to the Jefferson Medical College and St. Joseph's Hospitals; Consulting Gynæcologist to the Philadelphia Lying-in Charity and the Kensington Hospital for Women. Second Revised Edition, with 539 Illustrations. Royal 8vo, pp. xxxiv. and 17 to 900. London: H. Rebman, Limited, 1894. Price 25s.

When a book is beyond the size of an epitome for examination purposes, or even an ordinary student's manual, and also

is rather costly, the fact that a second edition is called for little more than three years after the first, is practically a proof of its excellence, and certainly there are few works on Practical Gynæcology that are more comprehensive than the one before us, or which, while instinct with the experience of personal work by the bedside and in the lecture room, give a better summary of the practice of other gynæcologists. The arrangement is somewhat unusual, for the matter is not divided into chapters but into 654 sections, and after a short introduction and the consideration of diagnosis, the author passes to methods of examination, both pelvic, including curetting, microscopic and bacteriological investigations, and abdominal, including exploratory puncture and incision; therapeutics, general and local, medical and surgical, preventive and curative, and the embryology, anatomy and physiology of the genito-urinary organs in women, and then deals *seriatim* with malformations, traumatisms, inflammations, deviations, genito-urinary hæmorrhage and ectopic gestation and genital tumours. As symptoms, diagnosis and treatment have to be dealt with again, there would be some difficulty in reference, but that the very full table of contents indicates the subject of each section, and there is a good index of subjects and also one of authors quoted. Dr. Montgomery's general standpoint is not to sacrifice any organ whose physiologic integrity is capable of being restored; he is very decidedly in favour of electrical treatment, especially of fibroids in women near the menopause. In regard to the vaginal methods of removing the cancerous uterus, from which many of the best authorities hope so much, we agree with him that, considering the ease with which the uterus can be reached from above, there is too great a tendency to extend the vaginal incisions and disregard the increased danger of infecting the parametria. He is, of course, sound on asepsis and insists on continued watchfulness, mentioning that, after careful and painstaking preliminaries, he has seen an operator place his sutures on a syringe box, an

assistant stroke his moustache, and a nurse use her handkerchief.

The type, paper and binding are excellent and the illustrations for the most part well executed and well chosen. The greater number are said to have been drawn and engraved specially for this work, for the most part from original sources. Still there are a large number of figures judiciously selected from older works, *e.g.*, those of Savage and Deaver, and others modified, and certainly not improved, *e.g.*, figs. 382, 383, and 384, where, moreover, fig. 382 should come after the others.

ANNUAL REPORT ON THE ADVANCEMENTS OF PHARMACEUTICAL CHEMISTRY AND THERAPEUTICS. Vol. XVII. for 1903. Demy 8vo, pp. 220. Darmstadt: E. Merck, 1904.

We have for several years had pleasure in noticing these reports and the present volume is as good as its predecessors. The preparations are arranged alphabetically, and in addition to the general index there are others of the bibliography, of the authors quoted, and of Diseases, Symptoms and Indications for Treatment, which greatly facilitate reference.

AILMENTS OF WOMEN AND GIRLS. By FLORENCE STACPOOLE, Lecturer for the National Health Society, &c., &c. Crown 8vo, pp. viii. and 220. Bristol: John Wright and Co., 1904.

This little book is full of good sense, exceedingly well conveyed. We are glad to notice it for two reasons: first, because as we heard at our first lecture on "Obstetrics," in reference to some very popular works for wives and mothers, it is well for medical men to be acquainted with the source of their patients' information, and secondly, because of the chapter on "Cancer of the Uterus," which, if it were taken to heart by English women in general, would do much to aid us in dealing more successfully with that terrible disease.

PUBLICATIONS RECEIVED.

FROM BAILLIÈRE TINDALL AND COX, LONDON :

Cleft-Palate and Hare-lip : the Earlier Operation on the Palate, by EDMUND OWEN, M.B., F.R.C.S., Surgeon in Chief to the French Hospital, Consulting Surgeon to St. Mary's Hospital and to the Hospital for Sick Children, Great Ormond Street, London. Medical Monograph Series, No. 10. Crown 8vo, pp. 112, with illustrations, 1904. Price 2s. 6d. net.

FROM ARCHIBALD CONSTABLE AND CO., LONDON :

The Clinical Causes of Cancer of the Breast and its Prevention, with Analyses of a Hundred Cases, by CECIL H. LEAF, M.A., M.B. Cantab., F.R.C.S. Eng., Assistant Surgeon to the Cancer Hospital and the Gordon Hospital for Rectal Diseases. Demy 8vo, pp. 64, 1904. Price 2s. net.

FROM S. KARGER, BERLIN ; WILLIAMS AND NORGATE, LONDON :

Beitrage zur Anatomie der Tubenschwangerschaft, von Dr. FRITZ KERMAUNER, Assistent an der Universitaets, Frauenklinik zu Heidelberg, mit 44 Abbildungen. Large 8vo, pp. 137, 1904. Price 4s.

FROM E. MERCK, DARMSTADT AND LONDON :

Report on the Advancements of Pharmaceutical Chemistry and Therapeutics. Vol. XVII. for 1903. Demy 8vo., pp. 216.

FROM REBMAN, LTD., LONDON AND NEW YORK :

Elements of General Radiotherapy for Practitioners, by Dr. LEOPOLD FREUND, Vienna. Translated by G. H. Lancashire, M.D. Brux., &c., Assistant Physician to the Manchester and Salford Hospital for Skin Diseases. With 107 illustrations in the text and one frontispiece. Royal 8vo, pp. xxii. and 538. With Notes on Instrumentation by Clarence A. Wright, F.R.C.S.(Edin.), F.F.P.S., &c. Illustrated, pp. 60. Price £1, cloth ; £1 5s. half bound.

FROM GEORGES STEINHEIL, PARIS :

Introduction a l'étude clinique et a la pratique des Accouchements, par le Professeur L. H. FARABEUF et le Docteur HENRI VARNIER. Preface du Professeur A. PINARD. Avec 362 figures. Nouvelle édition revue et corrigée. Large 8vo (11 x 7'5), pp. x. and 480. N.D.

And the following Pamphlets and Reprints :—

Gastrotomia primitiva per gravidanza ectopia a termine con forzato abbandono della placenta (madre e bambino viventi), pel' Professor GIOVANNI CALDERINI, Direttore della R. Clinica Ostetrico-ginecologica di Bologna (and others ; a full list will appear later).

Rara associazione neoplastica del collo uterino (Epitelioma Malpighiano-Angioneoplasma complesso con metaplasia del connettivo e del mometrio), pel Dott. GIUSEPPE CRISTALLI, Assistente, Istituti O. G. della R. Università di Napoli, diretto dal Prof. O. MORISANI.

Extracts from the works of Professor T. E. REIN, published in Russian by his pupils on his removal from Kief after sixteen years' service, to occupy the Chair of Clinical Obstetrics and Gynæcology at the Imperial Military Academy of Medicine at St. Petersburg, in 1899, with a portrait.

Tuberculosis of the Urinary Tract, by EDMUND GARCEAU, M.D., &c., &c., Boston.

Tuberculosis of the Urinary System in Women, Report of thirty-five cases, and Surgery of Urinary Tuberculosis in Women, by GUY L. HUNNER, M.D., Associate in Gynæcology, Johns Hopkins Hospital, Baltimore.

Zum Problem vom Geschlechterhaeltnis der Geborenen, von B. S. SCHULTZE, in Jena.

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BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, JULY 14, 1904.

DR. H. MACNAUGHTON-JONES, VICE-PRESIDENT, IN THE CHAIR.

MR. CHRISTOPHER MARTIN exhibited the following specimens: (1) Bone Crochet Hook removed from the Abdominal Cavity; (2) and (3) Two Specimens of Arrested Development of the Uterus; and read the following notes:—

(1) My first specimen is a foreign body, which I removed from the abdominal cavity in December last. It is a portion of a bone crochet hook about five inches long. The patient was a widow, aged 48. She had missed her periods for a few months, and believed she was pregnant. With the object of procuring abortion she got a bone crochet hook, and having sharpened it to a point, pushed it up into the uterus. It slipped from her fingers and she was afterwards unable to get hold of the end of it. It worked its way right through the uterus and became free in the peritoneal cavity. She became alarmed, and consulted her own medical man who sent her to me. When I examined her a fortnight after the occurrence, I could feel the foreign body lying in the left iliac fossa quite apart from the uterus. She was a very thin woman, so that it was easy to palpate

it. She was not pregnant. I opened her abdomen and found this bony rod lying in the left iliac fossa, completely embedded in the omentum. It was easily removed, and she made a good recovery from the operation. On looking at the uterus I could see on the posterior aspect just above the level of the internal os, a round, depressed scar—evidently the spot through which the rod had passed. There were a few adhesions between the omentum and the small intestine, but there were no signs of inflammation in or around the uterus itself. When I saw her she was in a very strange mental condition, bordering on insanity. She was firmly convinced that she was pregnant and that she would still have to be confined, and would have to go to prison for attempting to procure abortion. I saw her again about two months ago, and then found that she had developed cancer in the breast, which, however, she refused to have removed.

(2) The next specimen illustrates one variety of arrested development of the uterus. The patient was a single girl, aged 18, who had never menstruated. About the age of 15, the usual external signs of puberty appeared, and she began to have monthly attacks of pain in the pelvis, lasting for a few days. These monthly pains gradually increased in severity until she saw me. When I examined her I found her a well-developed girl as regards figure and mammae. The vulva was normal, but there was no vagina except a small cul-de-sac about half an inch deep. On passing the sound into the bladder and finger into the rectum, it was evident that nothing intervened except the vesical and rectal walls. I opened her abdomen and found that the uterus and rectal walls were represented by two small solid muscular bodies, one on each side of the pelvis. Each of these bodies received at the upper end a small Fallopian tube and a well-marked round ligament. Below, each body faded away in the cellular tissue between the bladder and the rectum. The right body was better developed than the left. The ovaries were well developed and apparently normal.

There was no structural connection between the uterine body of one side with that of the other, they were, indeed, separated by a gap of two inches. As I was anxious to stop the monthly paroxysms of pain, I removed both the ovaries, together with the Fallopian tubes and the representatives of the uterus. The patient made a good recovery. She has since remained well and is quite relieved of her old pains. It is evident that in her case the two ducts of Müller did not coalesce, whilst the uterine and vaginal portions were arrested in their development and did not form mucous canals. A week or two ago the patient came again to see me, looking very well, and she informed me that she was thinking of getting married, and was anxious to know if I could make her a vagina.

(3) The third case is one in which the uterus was bicornuous—the right horn being distended with menstrual fluid and not communicating with the rest of the uterine cavity. The patient was a single girl, aged 21, anæmic and delicate, who consulted me on June 1, 1904, complaining of violent pain in the right lower abdomen at each period, lasting the whole of the time and continuing some days afterwards. Menstruation occurred every three weeks, was scanty and only lasted three days. On examining her I found a mass about the size of an orange in front of and to the right of the uterus—a mass which I took to be tubal or ovarian. I took her into the hospital and on June 18 I opened her abdomen. I found the mass to be the right horn of a bicornuous uterus. It was tense and globular, and evidently contained fluid. It was attached to the rest of the uterus by a broad fibrous and muscular pedicle. The distended right horn, right tube and ovary were very adherent. I removed them by dividing their attachments in sections and was able to save the rest of the uterus with the left ovary and tube. The patient made a good recovery and returned home on July 10.

Dr. HEYWOOD SMITH said that it was remarkable how often sounds or other instruments passed through the

uterine wall without setting up any mischief. Referring to induced abortion, one lady he knew had brought on her own miscarriage thirty-five times and on several occasions nearly lost her life from severe flooding ; she used a long knitting needle for the purpose. Malformation or displacement of the kidney was so often associated with arrested development of the uterus that he would like to know whether Mr. Martin had examined the position of the kidneys ?

Mr. BOWREMAN JESSETT suggested that the last specimen might possibly be a fibroid or myoma of the Fallopian tube, it did not in his opinion resemble a bicornual uterus.

Dr. ROBERT BELL mentioned a case which he had operated upon for a tumour he supposed to be a subserous fibroid of the uterus, or possibly, as its attachment was at the cornu, of the Fallopian tube, and he removed it under that impression. The woman had been pregnant two years previously, and the pregnancy had terminated suddenly, a fact which he did not ascertain till after the operation. On a section being made of the tumour it was found to contain a four and a half months' fœtus in perfect preservation. The tumour weighed four pounds and had all the appearances of a fibroid.

Dr. MACNAUGHTON-JONES (Chairman), said that it was remarkable what a variety of instruments could be used to procure abortion ; he had known the handle of a toothbrush successfully employed for the purpose. One of the unpleasant consequences which might follow such attempts, was that imputations, quite unfounded, might be cast on the ordinary medical attendant. In a uterus examined by Mr. Bland Sutton and himself there was a perforation, and a portion of cotton wool was found in the abdominal cavity. The woman had been attended by a midwife, but the consequence to her ordinary medical man was very disastrous. Mr. Martin's second case was of much interest ; among five cases of total absence of the uterus and ovaries he (Dr. Macnaughton-Jones) had himself published, two were in

children, and in one of them he had succeeded in making a very fair artificial vagina; in the other, particulars of which he had read to the Society at a former meeting, the abdomen was opened for inflammation of the appendix, which was bound down to the floor of the pelvis. Before the operation he had been able, by a vesico-rectal examination, to determine the absence of the uterus and ovaries. He might refer to one of the three other adult cases, as it had a bearing upon the question of making an artificial vagina, as von Ott and others were reported to have done successfully. In his own case he had not been able to make a good vagina, and a rectal fistula was left. He was able to close the latter successfully, but had to sacrifice the substitute for the vagina he had made. Before the operation the mental condition of the patient was such as to cause grave anxiety; she had become hysterical and almost delusional, and was greatly reduced in strength; after the plastic operation, her health improved greatly and she became, and has remained, robust and well. It therefore seemed that the production of even a small artificial vagina might have a good effect. He thought there was no certainty that Mr. Martin's third specimen was a uterus, and suggested that it should be examined by a pathologist.

Mr. MARTIN, in reply, said that there was nothing to lead him to suppose anything anomalous about the kidneys. A manual examination of their position would have involved a larger incision than he cared to make. A section had just been made of the third specimen and the centre evidently consisted of inspissated blood-clot, which he held supported his view that it was the occluded horn of a bicornuous uterus filled with retained menstrual blood. The specimen had been hardened by the formalin and now felt solid, but when removed the tumour was soft and fluctuating. Dr. Macnaughton-Jones had referred to the medico-legal aspect of the first case. If it had proved fatal, it might have been his duty to decline to certify. It was remarkable how little irritation the very sharp piece of bone had

caused; perhaps it had been cleansed of germs in its passage through the muscular wall of the uterus. The mental state of the woman might partially account for her immunity. Insane women were curiously tolerant of abdominal injuries, and in many instances had opened their own abdomens and yet recovered without any bad symptoms from lesions that in all probability would have led to fatal peritonitis in others. He was convinced that the third specimen was an occluded horn with retained menstrual blood, but he would be pleased to have it examined by a pathologist, as suggested, and would submit a report to the Society.

Mr. BOWFMAN JESSETT read the following notes upon
A CASE OF GANGRENE OF THE LEG AFTER ABDOMINAL
HYSTERECTOMY FOR THE REMOVAL OF A LARGE
FIBRO-CYSTIC TUMOUR, WEIGHING TWENTY-EIGHT
AND A HALF POUNDS.

E. G., aged 54, married thirty-three years, five children, youngest aged 22; has not, so far as she can perceive, reached the menopause.

Six years ago an exploratory operation was performed at a London hospital for "flooding and tumour." According to the report from the surgical registrar, "a large uterine fibroid was found. Nothing further was done." Soon after leaving the hospital she had two floodings, more since. Now, the abdomen gets very big, no pain, but patient is unable to get about with any degree of comfort.

Varicose veins in legs for last three years, and occasional ulcers. General health fair, but is losing flesh. Constipated; menstruation regular every four weeks, lasting about a week; complains of loss of sight.

On Admission.—Florid, but thin. Abdomen enormously distended, umbilicus flattened, old median scar below it. Large mass occupying practically whole abdomen, dull on

percussion, no thrill, not tender. Superficial veins distended.

Per vaginam.—Uterus low down and cervix directed to right. Mass felt through posterior fornix.

She was admitted into the Cancer Hospital on Wednesday, June 1, and on the 7th Mr. Jessett operated. An opening about three inches in length was made in the middle line below the umbilicus for explorations. The tumour was found to be firmly adherent to the parietes over its whole surface, but by using some considerable force the parietes were peeled off. The whole scar tissue was removed by an elliptical incision, and the abdominal incision enlarged to enable the hand to pass round the tumour, when it was found to be quite free behind and the intestines well pushed up and not adherent. Mr. Jessett then, by bringing his hand up from behind, was enabled to peel the parietes quite free from the tumour, which was then readily shelled out, not, however, until the parietal incision had been prolonged from the pubes quite to the ensiform cartilage. The omentum was adherent to the tumour and had some very large veins. This was ligatured in segments and cut across. The broad ligaments were then tied and divided; the uterine arteries secured, and the cervix uteri cut across, after having stripped down an anterior and posterior flap of peritoneum. There was a considerable amount of oozing, so Mr. Jessett packed the cavity with iodoform gauze and brought the end out of the lower angle of the parietal wound.

The patient suffered a good deal from shock during the operation and after the removal of the tumour, which weighed $28\frac{1}{2}$ lbs. ; Mr. Keyser injected four pints of saline fluid into the median basilic vein, and a subcutaneous injection of strychnine was also given. After stitching up the peritoneum, two pints of saline fluid were introduced into the peritoneal cavity before finally closing the parietal wound.

The patient was returned to bed and seemed as well as could be expected. She, however, complained of a good

deal of pain in her right leg, which was somewhat dusky and cold. This was wrapped in cotton-wool and flannel bandages. Had a fairly good night, but saline fluid was given by the arm, and small quantities of saline fluid and brandy and beef-tea given by the rectum.

June 8.—Pulse small but good; temperature normal. No distension; gauze drainage removed. No sickness or vomiting. Ordered brandy, milk, and lime water by the mouth, which she retained. General aspect fairly good. Leg still somewhat discoloured but warm. Not so painful. Rectal feeding continued.

The patient gradually improved from day to day, the abdomen keeping quite flaccid, bowels opened, kidneys acting well, and she takes plenty of nourishment.

June 13.—Patient expresses herself better and stronger, takes all nourishment. The leg, however, is quite gangrenous from the knee downwards, being discoloured and cold, due undoubtedly to impeded blood supply, the skin being dry and shrivelled. No sensation below the knee. There are a few blebs. The limb is kept wrapped in boric lint, dusted with boric acid powder and the whole enclosed in a quantity of cotton wool.

The line of demarcation is just above the patella, verging downwards and backwards to about two inches below the joint posteriorly. The patient continued to improve daily, and on June 21, fourteen days after the operation, with the assistance of Mr. Churchill, I amputated the leg at the junction of the upper and middle third of the thigh. She bore the operation remarkably well, and suffered very little from shock. Before the operation she had a nutritive enema of brandy ʒj., with beef-tea ʒiij., administered.

June 22.—Has passed a good night and taken a small amount of nourishment. She has also been sustained by nutritive enemata. Ordered beef-tea, egg and brandy, milk and champagne.

June 23.—Stump dressed, a good deal of oozing from the drainage tubes; stump looks well. Patient's condition

generally satisfactory. Pulse good quality, but very quick. Temperature normal.

Patient gradually lost ground and died on Sunday, the 25th, four days after the amputation, and nearly three weeks after the removal of the tumour.

Post-mortem.—The abdominal wound was quite healed and firm. There was some suppuration in the stump. The external iliac was found to have a firm clot in it extending from its junction with the common iliac for about one inch downwards.

The kidneys were both much diseased and degenerated, this was not suspected, as the urine was tested before the first operation, and only showed very slight trace of albumin; possibly the pressure of the tumour may have had something to do with this.

This case is of interest on account of the size of the tumour and also in respect to the gangrene of the leg. That this was caused by the plugging of the external iliac there can be no doubt, but it is difficult to understand why this artery was plugged, as there was no sign of its being involved in the ligature or twisted. Could it have been caused by the pressure of the tumour? But even then, why was not collateral circulation established? It has been suggested that these clots may be the result of bacterial infection. In this case it could hardly have been so, as the patient complained of pain, and the leg was somewhat dusky within an hour of the completion of the operation. I shall be glad if any Fellow who may have had a similar experience will explain the cause.

Mr. JESSETT also showed a

MYOMATOUS UTERUS, REMOVED BY ABDOMINAL
HYSTERECTOMY,

illustrating the presence of sub-mucous, interstitial and sub-peritoneal growths, and read the following note:—

A. H., aged 50, married, no children or miscarriages, was seen by me in consultation with Dr. Smyth, Colebrook Road, on June 2, 1904.

History.—For about two years has had aching pains in the groins, especially the left, and in the back. Of late has noticed a swelling in her abdomen. Has had a brownish discharge for last six months. Complains of morning sickness, nausea, and pains in the upper abdomen after meals. No hæmatemesis; no increase in micturition; menstruation regular monthly, lasting a week, less copious, with pain for one or two days.

Examination.—The abdomen is distended at the lower part by a large very hard mass, extending to within one inch of the umbilicus, and not mobile; no tenderness; a hard knob is felt in the right side; the rest of tumour smooth, and apparently wedged into the pelvis.

Per vaginam.—Cervix high up and to the left. Body of uterus not distinguishable. Mass filling both fornices continuous with abdominal tumour. On bimanual examination the tumour is found to be very fixed, only very slightly mobile. On June 14 I opened the abdomen by the usual incision, and by means of Doyen's hysterectomy screw with some difficulty lifted the tumour out of the abdomen, and removed it by the sub-peritoneal method. The patient made an uninterrupted recovery. On section of tumour it was found to contain several large sub-mucous, intramural and sub-peritoneal fibroids.

Mr. CHARLES RYALL said that Mr. Jessett was to be thanked for showing this giant myoma again, and for the further history of the case, especially as it had turned out unsuccessfully, for much more was to be learned from one failure than from many successes. Apart from the immense size of the tumour, the remarkable point was the extent and extreme intimacy of its adhesions to the abdominal wall. The cause of the gangrene was very obscure; the early onset of the symptoms contradicted the idea that it was due to bacterial invasion at the time of the operation. He thought that the gangrene might possibly be due to thrombosis of the common iliac extending down to the bifurcation and then along the external iliac, or to dislodgment of an

embolus in the aorta, owing to the manipulation of the tumour at the time of the operation.

Dr. HEYWOOD SMITH mentioned that many years ago a patient of his did perfectly well after hysterectomy for nearly a fortnight after the operation, and then fell back dead while sitting up to have her dinner, the cause of her death being a pulmonary embolus. In that case the tumour had been a very large one. The occurrence of embolism after abdominal operation was a question of deep interest. Possibly it was more frequent in connection with large tumours where the blood supply was great and the vessels had been subjected to pressure, and perhaps, afterwards, to tension, at the time of the operation.

Dr. J. J. MACAN reminded the Fellows that though gangrene was uncommon, if not unique, after abdominal operations, it was by no means so after childbirth, affecting various parts of the body, but most commonly the lower extremities. In a recent number of the *Zentralblatt* there were abstracts of articles on the subject by Schaeffer and Wormser, and both of them agreed in attributing it to infection. In Mr. Jessett's case it seemed that infection, if it had any influence, must have existed before the first operation.

Dr. RICHARD SMITH asked whether there had been any œdema of the leg, and what had been the after treatment.

Dr. MACNAUGHTON-JONES, junior, suggested that the pain complained of by the patient two hours after the operation could hardly have been due merely to local anæmia, and that there might have been some pressure on the nerve as well as on the artery.

Dr. ROBERT BELL remarked that in a blood-vessel, so far as he understood it, coagulation could only occur in the presence of a foreign body. In healthy blood-vessels coagulation would not take place, but inflammation in a vein or artery would act as a foreign body, and would produce the catalytic effect which caused the formation of a clot. In a case such as the one Mr. Jessett

had brought before them, some injury might have occurred to either the innominate vein or artery, but if to the former the embolism would have been in the pulmonary artery rather than in the iliac, and he therefore thought that there must have been some lesion of the iliac artery to account for the clot.

Mrs. SCHARLIEB mentioned a case in which arrangements had been made to remove a very large fibroid, but two days before the proposed operation the patient was taken exceedingly ill with thrombosis of the left femoral vein, and the operation had to be postponed *sine die*. The patient had not suspected any phlebitis or other trouble in her leg, and there had not been any recent operation or manipulation in her case.

Dr. BELL explained that he by no means suggested that Mr. Jessett had injured the artery. Mrs. Scharlieb's case supported his own theory that the pressure of a large fibroid upon the iliac vessels might cause sufficient irritation to induce the formation of a clot, and thus produce the same effect as a foreign body.

Dr. MACNAUGHTON-JONES said that he did not understand that there had been any injury to the vessels during the removal of the tumour. Large tumours pressing upon the great vessels of the pelvis undoubtedly sometimes affected these vessels injuriously, and it was more than possible that in the present case, especially considering the co-existent kidney disease, there had been an obstructive arteritis, and that the manipulation necessary during the operation had loosened an embolus already formed.

Mr. JESSETT, in reply, said that there had not been before the operation any swelling of the legs, such as would naturally have been attributed to pressure of the tumour. The patient, it was true, had varicose veins, but not to any extent worth noticing. Pressure sufficient to interfere with the arterial circulation must, he thought, have interfered with the venous also, and would then have caused considerable swelling of the legs. Although the clot in

the external iliac extended about an inch up to the bifurcation, the internal iliac was free, and it was difficult to understand why the collateral circulation was not sufficient to carry on the nutrition of the limb. In his opinion, the only explanation of that was that during the operation, perhaps owing to nervous shock, the woman lost very little blood, the general circulation was impeded, and the *vis à tergo* was insufficient to drive the blood through the leg, and a clot gradually formed, which increased the difficulty. It had also crossed his mind whether the saline solution, of which the patient received a considerable quantity, had been absolutely sterile. There was no moisture in the gangrene whatever, the leg was simply dried up for want of nourishment. Dr. Macnaughton - Jones, junior, had suggested that there had been pressure on the nerve as well as on the blood-vessels to account for the pain. It was possible; we were all familiar with the sensation of "pins and needles" which supervened on pressure on a nerve. Still, in his own opinion, the arrest of the blood supply was the cause of the pain from the commencement.

Dr. HEYWOOD SMITH (Vice-President) having taken the chair, Dr. MACNAUGHTON-JONES read some notes on

ACCESSORY FALLOPIAN TUBES AND THEIR RELATION TO BROAD LIGAMENT CYSTS AND HYDROSALPINX,

and showed specimens illustrative of the origin of hydrosalpinx from accessory Fallopian tubes. Sampson Handley had criticised Kossman's view that broad ligament cysts were neither parovarian, nor cystic dilatations of the Wolffian diverticula or ducts, but are derived from accessory Müllerian ducts (sacro-parasalpinx serosa). Handley and Shattock had demonstrated, from specimens in the College of Surgeons' Museum, the origin of accessory hydrosalpinx from the pronephric funnels of the Müllerian duct. Handley also showed that enucleable broad ligament cysts, developed above the tube, were derivable from accessory Fallopian

tubes. Alban Doran had anticipated Kossmann in his surmise that such cysts were of Müllerian origin. Hamilton Bell, from the examination of a cyst removed by Cullingworth, supported Handley's contention. The histological analogy between the accessory and the ordinary hydrosalpinx was complete.

These histological analogies were typically shown in the first of Dr. Macnaughton-Jones' specimens. The cysts were derived from the Fallopian tube. The ovarian fimbria was absent, and its place was taken by two cysts.

The second specimen Dr. Handley reported to be undoubtedly an accessory Fallopian tube, the important point in this instance being that both the pedicle of the cyst and its wall were muscular, and the cyst was lined with ciliated and columnar epithelium.

The third specimen was very interesting, and though not microscopically examined, there was little doubt of the nature of the cysts. When one of these was held up against a strong light, the plicæ could be seen through its wall. In this instance there was a cyst in the free edge of the broad ligament, attached to which were two small flattened cysts, while hanging from the peritoneal folds there were two small cysts and an accessory Fallopian tube. These latter Dr. Handley considers represent in abnormal number the pronephric funnels. Other specimens illustrating the paper were shown with the epidiascope.

He exhibited a form of clip to which a small weight was attached by aluminium bronze wire, or any sterilisable string, intended to supersede the use of forceps in keeping the cut edges of the peritoneum in position after opening the abdomen.

Dr. HEYWOOD SMITH said the only criticism he would offer of the cases described by Dr. Macnaughton-Jones was as to the word "accessory." When speaking of accessory organs one had in mind an organ parallel in function to the one described, such as an accessory mamma or accessory kidney. He suggested that in the case mentioned by Dr.

Macnaughton-Jones the word diverticulum or aneurysm of the duct should be used. They were really excrescences which seemed to be cut off, but evidently had the same foundation as the tube itself.

Dr. MACNAUGHTON-JONES said he could not agree with Dr. Heywood Smith in his view of the term "accessory."

Dr. JERVOIS AARONS showed

A NEW UTERINE MOP,

reading the following note: The difficulty and length of time wasted in removing the wool from the ordinary Playfair's probe after it has been used, led me to try and devise some means by which the mop might be more easily and quickly removed. It occurred to me that a cap of some absorbent material which would fit over a conical sound would serve the purpose, and such a cap or mop I have had made; this slips over a conical or tapering metal sound, and is held in position by a small bayonet catch, which effectually prevents it from leaving the sound. The dry mop weighs 13 grains (79 grammes); after being used they weighed 39 grains (2.5 grammes); they are, therefore, sufficiently absorbent for the purpose. The advantages over the ordinary Playfair's probe are: (1) Ease and rapidity of dressing the probe; (2) ease and rapidity of removing the mop after use; (3) they are easily sterilised; (4) the tapered part of the sound being made of plated copper can be bent to any desired shape. The caps and the probe were made for me by the Galen Manufacturing Co., Ltd., and I am indebted to them for the way in which they have carried out my ideas.



Dr. HEYWOOD SMITH concurred as to the difficulty in getting the cotton wool off the Playfair probe, unless one had the knack of rotating it in a direction contrary to that adopted when putting it on. The present device was useful because the ring fixed the swab securely, and after use released it.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, OCTOBER 13, 1904.

PROFESSOR JOHN W. TAYLOR, M.D., F.R.C.S., PRESIDENT,
IN THE CHAIR.

SPECIMENS AND CASES.

Dr. BEDFORD FENWICK showed a

CYST OF THE RIGHT FALLOPIAN TUBE (? ECTOPIC GESTATION), WITH A DOUBLE TWIST IN THE PEDICLE AND COMMENCING NECROSIS OF CYST WALL

and gave the following account of the case :—

The patient was 46 years of age, unmarried. Menstruation commenced at 14, and has been perfectly regular every twenty-four days, lasting three days, and otherwise quite normal. She came to the Out-Patient Department of the Hospital for Women, Soho Square, on October 6, stating that in August last the period was fifteen days late, lasted four days, and was very scanty, ceasing on September 5, since which time she had seen nothing. On September 30 she had a sudden, severe pain in the lower part of the abdomen, lasting three or four hours, and gradually passing off. On the morning of October 6 the same pain suddenly returned, and became very severe. On examination, the vagina was found to be large and lax, a tense swelling was felt in front of the uterus, fixed and extremely tender. Her temperature was 103° F., pulse 110. She seemed very ill, and was at once sent into the wards, and I performed abdominal section the next day. The uterus was pushed down into the pelvis by a cystic swelling, thick-walled and perfectly black in colour; it was attached by soft recent

adhesions to the bladder in front, and the uterus behind. A pint of black blood was drawn off from it, and the cyst lifted out of the abdomen, and it was then found to have a long pedicle twice twisted. On removal, a small, black ovary was found adherent to the outer edge of the cyst wall, and the cyst itself was found to be a dilatation of the outer third of the right Fallopian tube. There was no rupture but there was commencing peritonitis. The left tube and ovary were perfectly normal. It will be observed that the sac is lined with membrane, and contains apparently some firm, organised clots ; but as it may be the wish of the Society to refer the specimen to the Pathological Committee, I have not disturbed the latter in any way. It will be noted that the tube is extremely constricted about one inch from the cornu of the uterus, where the double twist was found, and that the surface of the cyst is perfectly black, and shows signs of commencing sloughing of its wall. The important question arises as to whether this is a simple hæmatosalpinx, or an ectopic gestation. In favour of the latter is the dilated condition of the vagina, the definite and large dilatation of the outer third only of the tube, not of its whole length, and the considerable quantity—at least one pint—of blood which it contained. Presuming that further investigation proves this supposition to be correct, I need scarcely point out the rarity of the case. I can remember having seen only one such example, and it must, therefore, be most unusual ; and it is further interesting to observe the rapidity with which necrosis and peritonitis were being induced, and the extreme danger which the patient would have suffered if she had not been immediately operated upon. She made an uneventful recovery.

After some remarks from Dr. DAUBER and the PRESIDENT, it was agreed that the specimen should be referred to a Pathological Committee.

Dr. FREDERICK EDGE showed the following specimens :—

(1) MICROSCOPICAL SECTION FROM A CASE OF GLANDULAR CARCINOMA OF BOTH OVARIES REMOVED WITH PERFECT IMMEDIATE RESULT, BUT WITH FATAL RECURRENCE WITHIN FOUR MONTHS.

The patient was 48 years of age, and, apart from the tumours, was in good health and condition. The operation was performed at the Women's Hospital, Birmingham, on May 26, 1904. The tumour on the right side extended to the liver, and was of peculiar shape, resembling a vegetable marrow with one side pushed into concavity. The pedicle on this side was broad and fleshy, no doubt owing to increase in the muscular tissue of the broad ligament, and he therefore divided it and secured the vessels separately. The other tumour was much smaller, and was tied straight off. Any adhesions were omental, and all bleeding points were secured; no drainage was used, and the patient made an easy and uninterrupted recovery. On August 17, in Dr. Edge's absence, the woman was readmitted into the hospital by his colleague, Mr. Furneaux Jordan, on account of pain and intestinal obstruction, but as this was found to be incomplete and intermittent, the abdomen was not opened. Large masses of growth could be felt in the pelvis and omentum, and these rapidly increased and she died on September 7, three weeks after her re-admission, that is, within three and a half months of the ovariectomy. The section, which was prepared by Dr. Smallwood Savage, showed that the tumours were glandular carcinoma.

(2) A LARGE, MANY-LOBED MYOMATOUS UTERUS SUCCESSFULLY REMOVED BY SUPRA-VAGINAL HYSTERECTOMY.

The patient was a small, thin woman, aged 42, and the operation had been performed on account of pain, symptoms of pressure on the bladder and bowels, and enlargement of the growth. The lobular masses ran under the peritoneum in several directions and were enucleated from their beds. The peritoneum and floor of the pelvis were injured to such

an extent that the abdominal cavity could not be closed by a complete transverse suture, and as the extensive opening up had led to free oozing, Dr. Edge thought it better to open the vagina and drain. During the following night there was sudden and very severe hæmorrhage, and it seemed that he would have to reopen the abdomen. Fortunately the bleeding ceased and did not recur, and there was no other disturbing symptom. Though there had been such extensive laceration of the tissues there was no fever, and this absence of reaction after such severe surgical wounds he attributed to the use of antiseptically impregnated sutures and the prevention of the so-called "implantation infection," more than to any other factor. His silk sutures are boiled in solution of corrosive sublimate or of biniodide of mercury, and used straight out of the solution; silkworm gut is treated in the same way; catgut is boiled in xylol, preserved in alcohol and corrosive sublimate (1 : 1,000) and used out of the preserving medium. Even if the outer surface of the ligature or suture be soiled by the hand, the antiseptic material is afterwards given off and kills the germs, or inhibits their infective action until the normal currents are re-established and the phagocytic agents are able to destroy the micro-organisms.

Mrs. SCHARLIEB mentioned a case similar to the one first related by Dr. Edge. She removed two solid malignant ovarian growths with thin, ordinary pedicles, and had no reason to suppose that the operation was in any way incomplete, but the woman died about six months later from a secondary growth affecting the transverse colon.

Mr. FURNEAUX JORDAN said that when, in the absence of Dr. Edge, he was called to the case, he expected to have to operate for intestinal obstruction, but by the aid of injections the bowels were freely relieved and he could then feel a small lump behind the cervix. As the only history he had was that the tumour removed was a solid ovarian one, and he had no hint of its malignant nature, and as the obstruction had been relieved, he did not interfere, and in a few

days was glad he had abstained from doing so, for in those few days the growth had increased so rapidly in size that it rose right out of the pelvis and could be felt under the abdominal wall.

Dr. EDGE said that it would have been natural for Mr. Jordan to suppose that after such a recent operation the obstruction was due to intestinal adhesion to the stump or pedicle. A fatal termination from the recurrence of such a malignant growth within three and a half months after a complete operation, had not, so far as he knew, been previously recorded.

Mr. J. FURNEAUX JORDAN showed :—

(1) DOUBLE TUBERCULOUS PYOSALPINX.

A. H., aged 21, single ; general health good. For some four months had indefinite pain in the lower part of the abdomen, but did not think it was anything serious. One day, when having her bath, felt a lump in the lower left part of the abdomen. The pain becoming worse, she went to her doctor, who asked me to see her. On examining her I could feel the top of two distinct swellings above the pelvic brim. Since, apart from the pain, she complained of nothing and there was no interference with her general good health, I thought it was an ovarian cyst. It was two or three weeks before I could admit her into the Women's Hospital, and by that time the pain had become very severe. On April 19 last I removed by abdominal section the two tubes you see here—the larger one from the right side. A few tubercles were dotted about the peritoneum of the broad ligament. One ovary, quite free from tubercle, I left alone ; the other I removed. The patient now, six months after the operation, is in excellent health.

(2) CYSTOMA OF LEFT OVARY.

Mrs. H., aged 28, was four months' pregnant and complained of excessively frequent micturition and constant

bearing down pain. On examination I found the uterus pushed up into the abdomen and the pelvis completely filled by a tense elastic tumour. On May 8 last I operated at the Midland Nursing Home by the vaginal route, and through a small incision into Douglas' pouch I tapped the cyst, pulled it out, and ligatured the pedicle. The cyst was a good bit larger than it appears to be, the walls being stretched and thinned. Fortunately there were no adhesions. Pregnancy was uninterrupted.

Mr. JORDAN said that he was not now so keen on the vaginal route for operating as formerly ; but this case of the removal of a cystoma from a pregnant woman without any interruption of the pregnancy, showed that there were cases in which the vaginal route had very great advantages and should certainly be chosen.

Dr. WILLIAM DUNCAN said that tuberculous pyosalpinx was met with in some women who appeared to be the picture of health, and it was remarkable how well such cases did, even though, at the time of the operation, they might seem to be most unfavourable, and the whole of the peritoneum might be studded with millet-seed tubercle. He instanced a case in his own practice which afforded a typical specimen of double tuberculous pyosalpinx, now in the museum of the Middlesex Hospital, both tubes being distended with cheesy pus. Five years after the operation the patient was in perfect health. Tumours complicating pregnancy were always of very great interest, and, when ovarian, should invariably be removed at whatever period of the pregnancy they might be detected. But he must join issue with Mr. Jordan as to the vaginal route, for he thought the abdominal route should always be chosen. He would be very sorry to open the vaginal vault, hoping, but by no means sure, that there were not adhesions that might make the removal of the tumour difficult or even impossible. As a good example of the superiority of the abdominal route and of the tolerance of the womb, even during labour, to surgical proceedings, he mentioned that in a young married woman in whom a con-

tracted pelvis was suspected, he found not only a pelvis justo minor, but a hard tumour fixed to the sacrum, which would have prevented delivery by the natural way. At term, labour having begun, he opened the abdomen and determined to try and remove the tumour. Before deciding to open the uterus, he extended the incision to the ensiform cartilage, drew out the uterus, and was then able, with much difficulty, to remove the sacral tumour, a dermoid. He returned the uterus to the abdomen and closed the wound at ten in the morning, and the patient was delivered by forceps at two o'clock the same afternoon, and made a perfect recovery without any rise of temperature.

Dr. MACNAUGHTON-JONES said that it was not uncommon to have absence of pain in pyosalpinx, and instanced some cases in which this immunity was present, notably one he had recorded at the Obstetrical Society, in which there was a large double pyosalpinx. The pelvis was filled by a large effusion containing two pus sacs, and the bladder was distended from pressure. The patient had never complained of pain, and the symptom for which she sought relief was incontinence of urine. He had brought a case of tuberculous salpingitis before the Society three years ago, which was unilateral, and the sac similar to one of those shown by Mr. Jordan. It was primary tuberculosis, and the lady had since had two pregnancies, one of which was a twin birth. The lesson to be learned from these cases was that the risk entailed by the non-removal of such pus sacs was very serious. As to the second specimen, the choice of operation for ovarian cystoma by the vagina would depend upon the diagnosis, the unilocular nature of the cyst and the absence of adhesions. Given accuracy of diagnosis on these points, and there could be then no doubt that the vaginal route would be the preferable one, but such diagnosis was sometimes extremely difficult. Operation on ovarian cystoma in pregnancy was now the accepted rule, but the time of selection was from the end of the second to the fourth month.

Dr. BEDFORD FENWICK said the case of tuberculous tubes shown by Mr. Jordan was one in which he felt the greatest interest, because, apart from the excellent results obtained by Mr. Jordan, the case opened up a very large and important question. He had operated on a considerable number of these patients, and with results which had impressed him more and more with the advisability of early operation in all cases of pelvic disease which appeared to be tuberculous in character. Most abdominal surgeons had met with cases of tuberculous peritonitis in which the mere opening of the peritoneal cavity, even if nothing else was done, had been followed by the disappearance of the peritoneal mischief and more or less rapid improvement in the patient's health. But it appeared almost as if the logical lesson of that fact had not been entirely appreciated; his experience compelled him to believe that there were a large number of cases of tuberculous disease in women which originated in the ovaries or tubes, and that the early removal of the primary disease, even if secondary mischief had appeared, must be productive of some good, and might even lead to cure. At any rate, he had seen a number of cases in which the latter event had occurred, and might mention one excellent illustration of it. A woman, aged about 33, had been admitted into his wards for ovarian and tubal disease and general peritonitis. It was evidently tuberculous in character, and the apices of both lungs contained cavities, whilst the patient was reduced to a state of extreme emaciation and exhaustion. Before operating, he pointed out that his hope in these cases was, by removing the original source of disease, to prevent further general infection, and certainly to cure the tuberculous peritonitis, and assist the patient in fighting against the pulmonary extension. In that case both ovaries and tubes were found to be extremely diseased, and the whole pelvic contents matted together, whilst the intestines and peritoneum were thickly studded with miliary tubercles. He removed the diseased appendages, the peritonitis completely cleared up, the lungs commenced to

improve at once, and when she left the hospital she had gained more than a stone in weight, and the pulmonary cavities were healing. Some months afterwards, when she reported herself, her general condition was excellent in every way. It was almost needless to say that equally good results could not always be obtained. When, for example, the lumbar or thoracic glands had become infiltrated, so that secondary foci of infection had developed, one could not hope for complete cure; but as it must take some time for secondary developments, he was convinced that early operation afforded the best ground for hope that a complete cure might be effected, and that it was not only common-sense and surgical science in these, as in every other case, to remove as speedily as possible the *fons et origo mali*, but that, in cases of tuberculous pelvic disease, there was a great possibility, by early operation, not only of removing the local disease from which the patient suffered, but also of saving her from the gravest secondary developments.

Dr. E. TENISON COLLINS agreed with Dr. Macnaughton-Jones that, if in diagnosis one could be sure that the cyst was unilocular and non-adherent, operating by the vaginal route was both simple and rapid. He recalled two cases of his own; in one the cyst was large, and in the other though not so, was rapidly increasing in size; in each case he opened the abdomen by a small incision; both went on to term and did well. As it turned out, there were no adhesions in either case. He was glad to hear Dr. Duncan speak so emphatically in favour of the abdominal route.

Dr. EDGE remarked that though much of his experience accorded with that of Dr. Bedford Fenwick, he could not be so enthusiastic about the effect of removing tuberculous appendages upon tuberculous lesions already present in the lungs. On the whole the results of his operations had been favourable, but by no means so brilliant as described that evening. For instance, after an operation of the kind last summer, the wound healed well, and all seemed satisfactory for a fortnight, when, suddenly, the patient's mental condi-

tion changed, miliary tuberculosis set in, and she died in a fortnight. There was, it is true, an abscess cavity in the lung.

The PRESIDENT said that he entirely agreed with Dr. Edge. Not very long ago he obtained a good immediate result after a difficult case of operation for removal of a double tuberculous pyosalpinx, but the patient afterwards succumbed to tubercular meningitis. In the worst cases of tubercular disease it by no means followed that the removal of one local manifestation of the disease was necessarily attended by improvement in another.

With regard to the question of vaginal ovariectomy during pregnancy, he would like to draw attention to the fact that an ovarian cyst which gave distinct fluctuation—a cyst therefore that was probably a simple cyst and not a dermoid—was very rarely adherent when pregnancy was found co-existing; and if the cyst was blocking the pelvis below the pregnancy it was, as a rule, better and safer to attack it from the vagina instead of from the abdomen.

In a case very similar to Mr. Jordan's which he brought before the Obstetrical Society a few years ago, the tumour was not discovered until the patient was in labour, and the cyst was met with as an obstruction to delivery. In this case he removed the cyst by vaginal section and delivered the patient at the same operation, both mother and child doing well. No abdominal wound was made; no eventration of the uterus was necessary to get at the tumour; but the cyst was removed according to the best surgical standards, by the nearest, quickest and safest route. In such cases, he considered the vaginal route ideal.

Mr. FURNEAUX JORDAN, in reply, said that the President had to a great extent answered all that had been advanced against operating by the vagina. Dr. Duncan, however, seemed to think that if the cyst had been adherent, he (Mr. Jordan) would have been in a serious difficulty, and in this he could not agree. He could have proceeded at once to operate from the abdomen and the patient would have been

none the worse for the small opening that had been made in the vaginal vault. The case was an excellent illustration of the fact that, as the President had said, when there were no adhesions and the tumour was below the pregnancy, the vaginal route was the right one. To say or infer that he would adopt the vaginal route in every case would be absurd. The President and Dr. Edge had also answered some of the remarks that had been made as to the effects of operations for pelvic tuberculosis. The benefit upon tuberculous peritonitis of merely opening the abdomen was well-known, but, as regards the wider operation for the removal of tuberculous pyosalpinx, it was most difficult to give any prognosis, especially where there was general peritonitis and extensive deposits in the mesentery. One case would get well, and perhaps the next, apparently quite similar, would not. One could not say why; one could only hope for success knowing one had done one's best.

Dr. WILLIAM DUNCAN showed a

CANCEROUS UTERUS REMOVED BY COMBINED VAGINAL
AND ABDOMINAL HYSTERECTOMY,

and read the following notes :—

The uterus shown was removed from an exceedingly stout nulliparous lady, 42 years of age, who had been twice married, and consulted Dr. Duncan in July last for menorrhagia, which had lasted four months. Fifteen years ago she consulted Dr. Duncan for the same condition, when the uterus was dilated and curetted. A mucous polypus was removed, and a complete cure resulted. On examination the vagina was found to be very small; the cervix uteri was healthy, the sound passed 3·5 inches, and caused bleeding. The patient was so stout that a bimanual examination was not possible. She looked healthy and well, and suffered no pain or offensive discharge. On dilatation of the uterus under anæsthesia, the curette brought away a lot of cheesy material; this was examined by Mr. Targett, who

reported: "these curettings from the interior of the uterus are thickly infiltrated with a soft columnar-celled carcinoma of the villous type." A week later Dr. Duncan removed the uterus by hysterectomy, and as the vagina was so small and the patient so stout, he adopted the combined method. When anæsthetised the patient was placed in the lithotomy position and an incision made all round the cervix; the bladder was separated up, and Douglas' pouch opened. Next the abdomen was opened, and the uterus removed in the usual way, but with the greatest difficulty owing to the excessive thickness of the abdominal walls and also to the fact that the broad ligaments were very short and did not allow the uterus to be pulled up much. The patient had a normal temperature on the eighth day. Dr. Duncan thought that perhaps it would have been easier to have cut through the perinæum to the anus, and then have performed vaginal hysterectomy (as he has done on other occasions), rather than to have adopted the combined method.

Mr. BOWREMAN JESSETT did not understand why a combined vaginal and abdominal operation should have been necessary; a uterus of the size shown was, in his opinion, comparatively easy to remove by the vagina. Of course, in very fat women there was more difficulty, but that could be overcome by making a deep incision on one or even both sides of the rectum through the perinæum and para-vaginal tissue, extending to the fornix. He had practised this method for several years, and believed he adopted it before it came to be known on the Continent as Schuchardt's incision.

Dr. HEYWOOD SMITH said that in the hands of one accustomed to use it, the sound would give information of any tortuosity of the canal or roughness of the internal surface of the uterus; if it were possible to diagnose malignant disease in that way it might be better to remove the uterus at once without curetting.

Dr. F. A. PURCELL said that at the Cancer Hospital,

where they had to remove many uteri, they had found that in a patient such as Dr. Duncan had described the abdominal route was practically out of the question. With the aid of the incisions Mr. Jessett had described, and which Mr. Jessett and he himself had developed independently, ample room could be got to secure the broad ligaments and bring down the uterus.

The PRESIDENT said he thought Duehrssen was the first advocate of the lateral incision, and the rule was simply an incision from one side of the vagina prolonged to a point half way between the rectum and the tuberosity of the ischium. This could be done on either side.

Dr. MACNAUGHTON-JONES said that he could not agree with Dr. Purcell's remarks as to the removal by the abdominal route being out of the question in any case of uterine cancer. Wertheim, v. Rosthorn, and a considerable proportion of the most distinguished gynæcologists operated by the abdomen, though a large number of men of equally high reputation thought the best results were to be hoped for from early vaginal extirpation. The contrast in practice had been well reviewed by Olshausen at Oxford quite recently.

Mr. CHARLES RYALL said that in some cases in which vaginal hysterectomy seemed almost impossible, it was found that the abdominal operation was not any easier. For the patient's sake the best operation was the quickest, and where time was the object he would pull down the uterus, and having opened the anterior and posterior fornices, would split it, and to avoid the loss of half an hour in trying to get ligatures on the broad ligaments, would apply forceps.

Dr. J. J. MACAN asked whether anyone would now seriously advocate the bisection of the body of a cancerous uterus?

Dr. HERBERT SNOW asked for the grounds upon which Dr. Duncan had based his diagnosis, and what were the clinical symptoms? He thought the use of the sound

unnecessary and undesirable for the diagnosis of uterine cancer.

Dr. EDGE asked Dr. Duncan what degree of elevation he was able to obtain? It seemed hardly possible for any woman to be so stout that, with full elevation and complete retraction, one would not have a better attack on the fundus from the abdomen than by any vaginal route.

Dr. DUNCAN, in reply, pointed out that he had laid much stress upon the extreme narrowness of the vagina of this patient as the reason why he had not in the first place undertaken a vaginal operation, which he agreed with Mr. Jessett to be the way of best attacking a cancerous uterus. In answer to Dr. Snow, he said that he used the sound because, owing to the woman's obesity, it was impossible to ascertain the size of her uterus by bimanual palpation. There were no clinical symptoms pointing to malignant disease, but, as he had mentioned, Mr. Targett had made a report upon the microscopical examination of scrapings from the cavity, and he had no doubt as to the diagnosis. He hardly ever made use of the sound either for diagnosis or treatment, and naturally would not have done so had he had reason to suppose that there was cancer of the fundus. Time was no doubt most important, and more than an hour taken over an abdominal operation certainly militated against the patient's recovery; but, as long as the time did not exceed an hour, he thought it did not much matter. He felt sure that Mr. Ryall would not advocate the bi-section of a cancerous uterus, and that if he had had the same unfortunate results from forceps that had occurred to himself, Mr. Ryall would give up forceps in favour of ligatures. Replying to Dr. Edge: He was not able to obtain satisfactory elevation as the operation took place at the patient's house, and no table suitable for the Trendelenberg position was to be had.

Mr. RYALL said that he would prefer bisecting even a cancerous uterus to leaving it behind unremoved. With regard to Dr. Duncan's remarks about forceps: Forceps

when applied to blood-vessels did not act like a string tied round an indiarubber water tube, but, by causing stasis, led to the coagulation of the blood in the vessels, and when coagulation had occurred there was no reason, if ordinary care was employed, why they might not be taken off without any hæmorrhage. They had been successfully used by gynæcologists in thousands of cases.

HÆMORRHAGIC ENDOMETRITIS.

DR. MACNAUGHTON-JONES showed the uterus and adnexa, with microscopical sections of the endometrium, from a case of hysterio-salpingo-oöphorectomy, performed for hæmorrhagic endometritis. He said that the case was interesting more from a clinical and pathological than from an operative point of view. The differentiation of the various forms of endometritis was most difficult. He hoped on a future occasion to indicate the histological differentiation of the various forms of endometritis which lead up to what is called "hæmorrhagic endometritis." In addition to this specimen there was another on the table, which he had shown at the Society before; he had brought it in order that the uterus and adnexa might be compared with the present one. Here the adnexa of one side had been first removed, and subsequently those of the other, for cystic disease; finally the uterus, for hæmorrhagic endometritis. The patient was now perfectly well. The pathological report was that the adenomatous change was extending from the endometrium into the substance of the uterus. In the case now for the first time before the Society, the patient, who consulted him in November, 1902, was in her 43rd year, and was over six feet in height. She had cardiac complications, and was completely blanched from constant hæmorrhage. After a month's rest she was curetted, and the report stated that there was nothing malignant, and only some slight glandular changes in the endometrium. Her health improved, and the hæmorrhage ceased for a

time. It recurred later, and she consulted him again in April of the present year. She was again curetted. The report then furnished to him by Dr. Cuthbert Lockyer was that the endometrium presented much round-celled infiltration of the stroma, the tubules having in many instances become distended into small cysts. A few of these were large enough to be distinguished by the naked eye. The curettings were under the microscope, and the changes described by Dr. Lockyer were quite evident. After a brief respite, the patient again suffered from recurrence of the hæmorrhage, and in August he performed hysterо-salpingo-oöphorectomy, from which she completely recovered. There was an interesting point with regard to the specimen. After removing the uterus, he split and cut up either cornu in the usual fashion, and out of one what appeared to be pus exuded to the extent of about one and a half teaspoonfuls. He thought the case one of suppurating endometritis, but a further examination showed that the exudation was not pus. An abstract of the histological report is of interest: "The uterus has been slit open towards the left cornu, as directed, and sections cut in this situation. They reveal a healthy fibro-muscular wall, but a thickened endometrium covered by a pultaceous deposit consisting of epithelial *débris*. The endometrium shows two pathological changes, advancing *pari passu*, viz., interstitial fibrosis and desquamation of the gland tubules, both changes being well marked. There was no sign of an abscess cavity. The extreme desquamation of the glands amply accounts for the mass of shed epithelium and *débris*, which looked not unlike true pus. The wall of the uterus at its thickest part measures one inch. There is a small circular fibroid the size of a marble in the left uterine wall, just above the line of amputation." The right ovary was cystic, the left also; there were also in the latter two small blood cysts, and both tubes showed evidence of chronic salpingitis.

The second was a rather unique specimen, which he had brought from Bonn that week, from Professor

Schroeder, assistant to Professor Fritsch, of that University. It was the section of an ovary from a still-born child dying in birth, and showed typical commencing ovarian cystoma.

Owing to the lateness of the hour these specimens were not discussed.

ON THE TREATMENT OF INTRACTABLE PROLAPSE BY
EXTIRPATION OF THE UTERUS AND VAGINA. By
CHRISTOPHER MARTIN, M.B., F.R.C.S.

Every gynæcologist who has much hospital experience must have had cases of severe total prolapse of the uterus and vagina, which are intractable to ordinary measures, cases in which no pessary can be retained, and in which the ordinary plastic and suspensory operations fail to give more than temporary relief. It was such a case that led me, in 1899, to devise and perform the operation of extirpation, not only of the uterus but also of the whole of the vaginal canal, as a radical cure. I have now carried out this proceeding in four cases. The final after-result has been excellent, and the cure of the prolapse complete. It is, however, a severe remedy. The operation is a long, tedious and bloody one, and attended with a good deal of shock. There is a considerable danger of wounding the bladder, the ureters and the rectum. Convalescence, in all my cases, was slow and complicated with suppuration in the depth of the pelvis. I should only, therefore, feel justified in recommending this operation in cases where other measures have been tried and have failed, and where the patient's discomfort is very great. It is to be kept in reserve as a *dernier ressort* and not performed as a routine line of treatment. For obvious reasons it should not be performed in married or marriageable women.

I do not propose to discuss at length the treatment of ordinary prolapse. In a great majority of cases all that is required is a well-fitting pessary, and for marked proci-

dentia I know of no instrument so satisfactory as Simpson's shelf pessary. Where no pessary can be retained, or where the patient objects to its use, a plastic operation should be performed to support the uterus. In such cases I am in the habit of doing ventrofixation of the uterus combined with an extensive colpoperinæorrhaphy. The results as a rule are very satisfactory. Occasionally, however, it will be found that the uterus breaks away from the abdominal wall, or remains attached to it merely by a long, thin band of adhesions, or becomes elongated and stretched, so that whilst the fundus is still adherent to the anterior abdominal wall, the cervix is outside the vulva. At the same time the vagina gradually dilates, the perineal scar stretches, and slowly the condition of total prolapse becomes re-established. In such cases vaginal hysterectomy may be performed. But whilst it is obvious that if the uterus be removed it can no longer be prolapsed, the operation does not cure the rectocele and cystocele. In one case in which I performed vaginal hysterectomy for prolapse, the vagina afterwards protruded as a large polony-like swelling and turned completely inside out.

We may now pass on to a brief description of the object and the steps of the operation of extirpation of the uterus and vagina. The main aim of the proceeding is, after removal of the uterus and vagina, to bring together the fascia of the pelvis in such a way as to make a firm fibrous diaphragm extending from one side of the pelvis to the other, and having adherent to it the bladder in front and the rectum behind. In this way a firm, solid pelvic floor is built up, measuring in depth from peritoneum to perinæum some three or four inches. We produce, in fact, a pelvic floor closely resembling that which obtains in the male pelvis.

In its broad outlines the operation resembles that of the radical cure of hernia. Thus the contents of the hernia are removed, the peritoneum is closed, the fascia is brought together with buried sutures, and finally the cutaneous wound is closed.

The patient should be kept in bed for several days before the operation, the functions of the stomach and the bowels regulated, and the general health improved as much as possible. The vagina should be rendered as aseptic as possible by frequent antiseptic douches. Should the prolapse be irreducible the parts should be well washed with soap and water and lysol, swabbed with methylated spirit, and then wrapped in gauze or lint soaked in a solution of biniodide of mercury. If, as is often the case, the cervix or vagina be ulcerated from friction against the patient's clothes, an attempt should be made before the operation to get the ulcers healed by keeping the patient in bed and applying antiseptic dressings. If any ulcers remain they should be swabbed with pure carbolic acid at the commencement of the operation.

The patient having been anæsthetised and placed in the lithotomy position, the vulva, the vagina and cervix are again thoroughly cleansed with lysol, followed by spirit and biniodide of mercury.

The cervix is seized with vulsella and drawn forwards. An incision is made in the mesial line through the vaginal mucous membrane from the posterior lip of the cervix to the edge of the perinæum. From the latter point two curved incisions are carried forward, one on either side at the junction of the vaginal mucous membrane and the skin of the labium, meeting in front about half an inch behind the meatus urinarius, that is, near the posterior edge of the vestibule. It will be seen that these lateral incisions completely encircle the ostium vaginæ, and roughly correspond to the line of attachment of the hymen.

The mucous membrane of the posterior and lateral vaginal walls is now dissected off with scissors and turned forwards, but at this stage the mucous membrane of the anterior vaginal wall is not interfered with. The peritoneum of the pouch of Douglas is next opened by a transverse incision, and the fundus of the uterus exposed and drawn downwards. The broad ligaments are ligatured

and divided from above downwards, either internal or external, to the ovaries and tubes. Should a ventrofixation have previously been performed, the attachment of the fundus to the abdominal wall must be severed with scissors.

The fundus having been seized with forceps is drawn downwards, acutely retroflexing the uterus, and exposing the bottom of the utero-vesical pouch. The peritoneum at the bottom of this pouch is divided transversely, and the bladder stripped off the cervix with the finger. The mucous membrane of the anterior vaginal wall is next dissected off the bladder and urethra with scissors and removed, together with the uterus, in one piece. This separation of the anterior vaginal wall is the most difficult and tedious part of the operation, and unless great care is exercised the bladder or ureters may be wounded. It usually causes free hæmorrhage from the veins of the vaginal plexus.

Each bleeding point must be seized and ligatured with fine silk or catgut. It is important to control all hæmorrhage completely before proceeding with the next step of the operation. In every one of my cases there has formed a collection of grumous pus, due, I think, to the breaking down of blood effused from these numerous small veins. All bleeding having been controlled, the abdominal cavity is closed by a purse-string suture of fine silk, passed through the peritoneum of the pouch of Douglas, the back of the bladder, and the top of the broad ligaments.

Below this purse-string suture the broad ligament of one side is sutured to that of the other with fine chromicised catgut. Below this the pelvic fascia of one side of the pelvis is sutured to that of the other side of the pelvis with fine interrupted chromicised catgut, beginning above at the base of the broad ligaments and working gradually down to just above the vulva. In this way a firm diaphragm stretching from one side of the pelvis to the other and supporting the bladder in front and the rectum behind, is built up of pelvic fascia. This is a most important part of the operation. I do not attempt to suture the bladder or

the rectum to this fascia. They afterwards become firmly attached to it.

The vulva and wound is then closed with fine silk-worm gut sutures which approximate the posterior halves of the labia.

If the hæmorrhage from the deeper part of the wound has not been completely arrested, I should recommend the insertion of two small rubber drainage tubes, one in front of the fascial column, and one behind it. These should be removed at the end of twenty-four hours.

The vulva is dusted with iodoform and a pad of iodoform gauze is applied. The patient's urine should be drawn off with a catheter for about a week, and she should be kept in bed for about three weeks.

As I have already said it is a long and difficult operation, and is attended with a good deal of risk to the patients, who are, as a rule, elderly women and often in feeble health. The prolapsed cervix and vagina is apt to be ulcerated from friction against the patient's clothes, and the discharge from these ulcers may lead to infection of the wound and suppuration. There is free hæmorrhage during the course of the operation, not so much from a few arterial trunks as from the numerous veins of the vaginal plexus. There is considerable risk of wounding the bladder, the ureters and the rectum. After the operation there is a good deal of shock, and shock in old, feeble women is a serious matter. The convalescence is apt to be a tedious one, and in all my cases was complicated with deep-seated suppuration in the wound. The after results, however, are excellent, and to my mind justify me in recommending this operation in suitable cases. Let me now very briefly refer to the four cases in which I have performed the operation.

CASE 1.—Mrs. K., a widow, 53 years of age, was sent to me by Dr. Leech, of Birmingham, suffering from stone in the bladder and complete prolapse of the uterus. She had evidently had the stone for a long time, and the strain-

ing to which it gave rise no doubt aggravated the prolapse. I took her into the Women's Hospital at Birmingham, and on July 22, 1895, removed a large calculus by the operation of vaginal cystotomy. The incision healed by first intention. On August 16 in the same year I performed the operation of ventrofixation, together with perinæorrhaphy. The wounds healed well, and the result was satisfactory for about two months. In November, 1895, she began again to have some cystocele, and I inserted a small pessary. Gradually the prolapse of the interior and posterior vaginal walls recurred, and in spite of pessaries of all shapes and sizes became total. In October, 1896, the vaginal prolapse was so marked that I again took her into the hospital and performed extensive anterior and posterior colporrhaphy, together with perinæorrhaphy. As before, the immediate result was satisfactory, but it was only for a time. In January, 1897, the cystocele recurred, and I had again to resort to pessaries. From this time onwards she attended as an out-patient with steadily increasing prolapse, until, in 1899, the uterus was once more quite outside the vulva, the vagina turned completely inside out and ulcerated from friction against the clothes. I then decided to perform total extirpation, not only of the uterus, but of the whole vagina. I explained to the patient exactly what I proposed to do, and she readily consented to have anything done that would afford her relief and enable her to carry on her work—that of a charwoman. The operation was performed on May 11, 1899. The patient was put back to bed in a state of collapse, but rallied after free stimulation with ether, brandy, and strychnine. After this she continued to progress satisfactorily until about the tenth day, when her temperature began to show a marked evening rise and morning fall. This continued until the fourteenth day, when it reached 103° F. A pair of sinus forceps were then thrust into the depth of the vaginal wound, and a large collection of grumous pus (evidently broken down blood) evacuated. After this she made a straightforward recovery, and left the hospital on the twenty-fourth day. After leaving the hospital she continued to improve, and when I saw her again on June 30 she was quite well. I examined her in the early part of July, 1901, and found her condition most satisfactory. She was perfectly comfortable, and had complete control of the bladder and rectum. The vulvar scar was firm and quite painless, and in her own words, "Life was now a

pleasure instead of a continual misery." Since then I have seen her from time to time (the last occasion being October 10, 1904). She has remained perfectly well and is very comfortable.

CASE 2.—Mrs. J. L., 56 years of age, was sent to me by Dr. Simpson, of Rugby, suffering from extreme prolapse. She was a widow and earned her living as a cook. She had had one child over thirty years ago. There was a history of gradually increasing prolapse for over twenty years. She had worn in turn instruments of various kinds (Hodge, ring, cup and stem, shelf, and Gariel's ball pessary). Finally nothing would stay in, and she had to support the totally prolapsed uterus with a diaper. In June, 1901, she underwent a plastic operation on the perinæum at one of the London hospitals, but this gave only a very temporary benefit. On October 17, 1901, I performed total extirpation of the uterus and vagina. For the first ten days the patient made a good recovery. Then her temperature began to go up at night to 101° to 102° , with morning remissions. Her pulse was never over 95. I evacuated some pus with the sinus forceps on the fifteenth day. After this she did well and went home on November 19, four and a half weeks after the operation. I saw the patient on December 17, and again in February, 1902. She could walk well, and go up and downstairs without any discomfort. There was no feeling of bearing down. She had no discharge, and the bowel and the bladder acted normally. The vulvar wound was strong and firm, and showed no signs of bulging when she strained. She returned to her work as a cook, and I hear has since remained well.

CASE 3.—Mrs. E. M., a widow, aged 45, was sent to me by Dr. Baldwin, of Birmingham. The uterus was totally prolapsed and the cervix ulcerated. There was a constant discharge of blood and of muco-pus. Thirteen years before she had been operated on by another Birmingham surgeon, who repaired her perinæum. I found it impossible to insert any pessary, and her condition was so bad that I decided to extirpate her uterus and vagina. The operation was performed on November 22, 1902, when I removed her uterus, ovaries and tubes, and the whole of the vagina. The operation was performed in the method already described. The broad ligaments were ligatured

with silk, the pelvic fascia sewn with chromicised catgut and the vulvar wound with silkworm gut. The patient did not make a good recovery. Her temperature went up the second day and fluctuated for some days between 99° and 102° . The deeper part of the wound became infected. Finally, a pair of sinus forceps were thrust in and a deep collection of pus evacuated. After this she progressed quite satisfactorily, and left the hospital on December 28, five weeks after the operation. The wound had then healed and all discharge had ceased. I saw nothing of her until April, 1903, when she came to the hospital complaining of discharge from the vulva. On examining her I found a deep sinus in the perinæum. I took her into hospital again and explored this sinus under chloroform, and was able to fish out some buried chromicised catgut sutures, which had become infected and had not been absorbed. After this the sinus healed up and the patient's condition improved. I last saw her about a week ago, and then found she had still a little discharge and that the vulvar cicatrix was red and irritable. Although she was infinitely better than she was before the operation, I suspect there is still a buried suture in the septum between the rectum and the bladder causing irritation. This case was the least satisfactory of the series.

CASE 4.—Mrs. J. L., a widow, aged 63, was sent to me by Dr. Cowen, of Malvern. She had had prolapse for over twenty years. Many years ago Mr. Lawson Tait repaired her perinæum, but in about a couple of months the cicatrix stretched, and she was as bad as ever. She wore numerous instruments (such as rings, balls, cup and stem, and shelf pessaries), but nothing would keep in. During the last few months the parts have been badly ulcerated from friction. When I examined her I found the uterus totally prolapsed, and the vagina turned inside out and ulcerated. On February 29, 1904, I performed total extirpation of the uterus and vagina, but did not remove the ovaries or tubes. The peritoneum and broad ligaments were sutured with fine silk, the pelvic fascia with gossamer gut, and the vulva with silkworm gut. A small rubber drainage tube was inserted into the posterior angle of the wound. It was a tedious and bloody operation and the patient was put back to bed rather collapsed, but rallied after free stimulation. Her temperature remained normal for the first fortnight. On

the fifteenth day it rose to 100·6°, and two days later a free discharge of blood and pus took place from the wound. After this she made a straightforward recovery; she got up on the twenty-third, and left the hospital on the twenty-sixth day after the operation. I last saw her on April 25, about two months after the operation. The wound was completely healed, she had no discharge, and no pain or discomfort of any kind.

In relating the cases I have not attempted to minimise the dangers and difficulties of the operation. I shall be glad of any suggestions or criticism from members of the Society which would improve the *technique*. In particular I shall welcome any suggestions which will help me to prevent the occurrence of the troublesome suppuration which has complicated the convalescence of all my cases, and which is the chief drawback of the proceeding. I hope, however, in any future case to avoid this suppuration by more careful disinfection of the field of operation, by more careful arrest of hæmorrhage, by the use of drainage tubes to prevent discharges collecting, and by the employment of perfectly sterile absorbable suture material.

Curiously enough, Dr. Edebohls of New York, devised and performed an almost precisely similar operation in April, 1900. His description of the operation appeared in the *New York Medical Record* on October 12, 1901; whilst I published an account of my first operation in the *British Medical Journal* on October 5, 1901, just one week before Dr. Edebohls. So that I feel that whatever merit there may be in the operation must be shared with Dr. Edebohls, who quite independently planned and carried out the same surgical proceeding.

The discussion of this paper was postponed.

BRITISH GYNÆCOLOGICAL SOCIETY.

NURSING EXAMINATIONS.

EXAMINATIONS for the Nursing Certificates of the Society were held on June 2 and 7, the written part on the former and the *vivâ voce* part on the latter date.

The following were the questions for the written papers :—

MATERNITY NURSING EXAMINATION.

(1) What are the reasons for giving vaginal injections after a confinement? And what are the most usual preparations employed for that purpose?

(2) If a patient 8 months pregnant is seized with profuse flooding, what condition would you suspect? And what would you do until the doctor came?

(3) What are the methods by which septic infection can be conveyed to a puerperal woman? And what precautions would you take to prevent such infection?

(4) What is "White Leg"? What symptoms would lead you to suspect its onset? And what nursing would be required in such a case?

(5) What do you understand by "after-pains"? What is their usual cause? And what remedies are, as a rule, used to control them?

(6) What is ophthalmia of the new-born? And what precautions should be taken to prevent its occurrence?

GYNÆCOLOGICAL NURSING EXAMINATION.

(1) What instruments are required for the operation of curetting? And how would you make them ready for the operator's use?

(2) What are the first symptoms of "Shock," "Internal Hæmorrhage," and "Peritonitis," after an abdominal section has been performed?

(3) Describe fully how you would prepare a patient for an operation upon the cervix?

(4) What are the different positions in which you might be required to place a patient for a gynæcological operation? And for which operation is each position most suitable?

(5) What are the most frequent causes of retention of urine after an operation? Describe fully what you would do for the patient's relief in such a condition.

(6) Describe fully the different kinds of enemata which are employed in gynæcological nursing.

The following candidates were successful in obtaining the Society's Certificate in Gynæcological Nursing:—

Miss Alice Butcher, certificate from Ipswich General Hospital (3 years).

Miss Maude Mary Brett, certificate from Royal Hants County Hospital (4 years), and New Hospital for Women, Euston Road.

Miss Frances Marie Barker, certificate from St. Bartholomew's Hospital (4 years).

Miss Minnie Morris, certificate from Royal Infirmary, Bristol (3 years).

Miss Charlotte Naylor, certificate from Bedford Union Infirmary (3 years).

The following candidates also gained the Society's Certificate in Monthly Nursing:—

Miss Maude Mary Brett, certificate from City of London Lying-in Hospital.

Miss Alice Butcher, certificate from General Lying-in Hospital, York Road.

Miss Minnie Morris, certificate from London Obstetrical Society.

The following were the questions for the written paper in an examination which was held in London, Nottingham,

Grimsby, and Whitehaven on September 15 ; the *vivâ voce* examination being held in London on September 22.

GYNÆCOLOGICAL NURSING EXAMINATION.

(1) Describe fully how you would make and apply glycerine plugs

(2) Describe exactly how you would pass the catheter after (a) an abdominal section, (b) an operation for ruptured perinæum, had been performed.

(3) How would you prepare a patient for amputation of the breast? and what subsequent nursing would she require?

(4) Describe fully how you would prepare (a) the instruments, and (b) the dressings, for a case of abdominal section.

(5) Give a brief report of some gynæcological case which you have nursed.

(6) Describe fully the usual dietary for a patient for the first week after abdominal section has been performed.

The following candidates were successful in obtaining the Certificate in Gynæcological Nursing on that occasion.

Miss E. M. Halliwell, Matron of the Samaritan Hospital for Women, Liverpool ; certificate from Royal Infirmary, Newcastle-on-Tyne.

Miss Eveline Marcon, certificate from St. Bartholomew's Hospital, London.

Miss Ety Moorhouse, certificates from South Devon Hospital, and Jessop Hospital for Women, Sheffield.

Miss Kitty Read, certificates from Grimsby Hospital, and Hospital for Women, Brighton.

Miss Sarah Radford, certificates from Bagthorpe Infirmary, Nottingham.

Miss Kate Sanderson, certificate from Bagthorpe Infirmary, Nottingham.

Miss Lucy Scott, certificate from Bagthorpe Infirmary, Nottingham.

ORIGINAL COMMUNICATIONS.

AMENORRHŒA OF FOUR YEARS' DURATION FOLLOWING A
BICYCLE ACCIDENT: RECOVERY.

By S. L. CRAIGIE MONDY, M.R.C.S., &c.

THE following notes on a case of amenorrhœa which was under my care from January to June, 1903, may prove of interest to my colleagues in the British Gynæcological Society.

Miss A., single, aged 21 years, consulted me on January 8, 1903, for amenorrhœa, which had lasted about four years. The history she gave was that she had been perfectly regular until some four years previously, when, while cycling, she collided with a cart, the shaft striking her in the region of the left kidney. She was taken home unconscious, and put to bed, and her doctor was called in. For some days she remained unconscious, and passed blood in her urine. The hæmaturia cleared away, but she was confined to her bed for some weeks. She said she had menstruated for one day only after the accident, but I am inclined to think that she mistook the blood of the urine for menstruation. She had been treated for amenorrhœa off and on during the four years, but the menses did not return. In the interval she had suffered more or less from headaches, mainly at the times when she imagined her periods were due. Her habits had been somewhat sedentary, as she was a school-mistress, and was also studying for examinations. I suggested an examination at her home, and accordingly visited her the next day. She was in an excellent general physical state, there being no signs of cardiac, pulmonary or renal affection.

Vaginal Examination.—Vagina was normal, except for a very slight leucorrhœal discharge. The cervix uteri was normal and its canal pervious, but the body of the uterus was unusually small, a condition which might have been due to the prolonged absence of the menstrual function. The Fallopian tubes, so far as could be made out, were normal. The right ovary was not felt, the left ovary was slightly enlarged and felt semi-cystic. She complained of no tenderness nor pain in either the uterus or ovaries. There was no thickening of the pelvic cellular tissue or uterine ligaments, and no prolapse of any of the organs. I decided to try medicinal treatment, and gave her a pill containing pil. phosphor., acid. arsenios. and strychnin. hydrochl., to be taken every night, and one containing fuchsin to be taken three times a day. She took these regularly for one week, and on January 17 was suddenly seized with fainting and giddiness which lasted about an hour, accompanied by vomiting and pains in the stomach, and a menstrual discharge lasting one day. Thinking that her sudden illness was due to the pills, she stopped taking them for two weeks and called in a local doctor—she lived some miles from me—who said she had influenza and treated her for it. The sudden onset of the severe disturbances was, in my opinion, due to a re-establishment of the menstrual function, but it is quite conceivable that she had contracted influenza as well.

On February 1, having previously written for my advice, she resumed taking the pills as before, with the result that menstruation reappeared on February 10. This time there was no great disturbance, but the flow was accompanied by the usual feeling of fulness in the lower abdomen, and slight pain. It was also equal in amount to what it had been previously to the accident. On February 14 she came to see me, and was looking and feeling well, I advised the continuance of the pill containing phosphorus, &c., as before, but suggested that the fuchsin pill might be taken twice a day only until seven to ten days before the

next "period" was due, when they might be taken three times again. The menses appeared, accompanied by severe backache, on March 12. On March 21 she came to see me again, and I made a vaginal examination to see what changes, if any, had occurred in the organs. I thought the left ovary less cystic and the body of the uterus somewhat larger, and it was now retroflexed and slightly retroverted. The patient was in excellent health and spirits. The menses recurred on April 2 and lasted three days, though the flow was somewhat less in amount. Both pills were now stopped altogether to see if the function would occur without them, and on April 26 the flow began without any disturbance or pain, and continued for three days. The next period occurred at the end of May and was more copious. With occasional irregularities in the amount and the dates, menstruation had come on every month up till the end of December, 1903. I heard from her again at the end of May. She informed me that she had only taken two of the pills (fuchsin), since January, *i.e.*, just before one of her "periods" was due, as the previous flow had been somewhat scanty. The menses had recurred each month, lasting on an average three days each time. Considering that the patient was still leading a sedentary life, I think this result very satisfactory.

That menstruation depends on ovulation is now, I believe, an established fact. I therefore felt justified, when asked, in informing the patient that, in the event of her marrying, she might reasonably hope to have children. Whether or not any pathological change was brought about in the ovaries in this case, of course, one cannot say for certain, but I imagine the severe shock was in itself sufficient to cause amenorrhœa. What effect fuchsin has on the ovaries I am unable to say, but as clinical assistant at Soho Square Hospital for Women I had seen it prescribed by Dr. Oliver in cases of amenorrhœa with good results. The only literature I had seen on the drug is in Martindale's "Extra Pharmacopœia," but this use is not mentioned.

A CASE OF VIOLENT MENORRHAGIA OF PUBERTY,
SUCCESSFULLY TREATED WITH SUPRA-RENAL EXTRACT.

By A. F. TREGOLD, M.R.C.S., &c., Guildford.

IT is sufficiently uncommon for the beginning of menstruation to be attended with such severe hæmorrhage as to threaten the patient's life, to make the following case worth recording.

On the morning of February 20, 1904, I was called into the country to see a girl 13 years and 9 months old, suffering from menorrhagia so profuse as to cause her parents great alarm. The history was that her first menstruation had occurred 4 months previously, lasting 5 days. Her second a month previously, also lasting 5 days. On each of these occasions she had lost a considerable amount of blood, but not sufficient to alarm her mother or to cause her to seek advice. On the present occasion the flow had appeared three days ago, but within the last 24 hours had increased to such an extent as to render her blanched, dizzy, and quite unable to stand without support.

There was no family history of hæmorrhagic diathesis or other disease; there was, however, a pronounced neuro-pathic tendency in both paternal and maternal stock. The girl was somewhat small for her age, and had been delicate and ailing in early infancy, but had afterwards always had good health.

On my arrival I found the girl lying in bed in an exceedingly weak condition. Her face, usually very ruddy, was white and pinched; her tongue and mucous membranes were very pale, and her pupils were dilated. The pulse was rapid (about 160) and very compressible; the heart sounds

were clear ; the lungs were normal, and nothing unusual could be detected on abdominal examination. She complained much of headache and dizziness. Her mother told me that she must have lost "several pints" of blood, and showed me several large pieces of black blood clot and half a dozen saturated diapers. As there had been no treatment, I thought the hæmorrhage might yield to ergot and opium, and accordingly gave her these in large doses, at the same time raising the foot of the bed and enjoining perfect rest.

Early the next morning I received an urgent request to go at once, as the bleeding, which had seemed to be abating, had again come on worse than ever. I found the girl absolutely blanched, with an almost imperceptible pulse, considerable dyspnœa, and dimness of vision. She was restlessly tossing about, at times delirious, and was utterly unable to keep down any food. Her mother said that she had twice lost consciousness for a few moments, and that the blood had "simply poured out of her, and she must have lost every drop in her body." She showed me several saturated napkins, in addition to about a pound of clot, and the sheets under the girl were also saturated. It was obvious that she was in an extremely critical condition.

Abdominal examination revealed a distended bladder, which I emptied. I then examined bimanually, but beyond a patent os, and considerable tenderness of the uterine body, there was nothing whatever abnormal. This examination caused so much screaming and struggling that I gave up the intention I had had of plugging, and decided to try the effect of supra-renal extract. I accordingly prescribed 15 minims of Parke Davis' solution of adrenalin chloride with 10 minims of tincture of cannabis indica, to be given every 2 hours ; at the same time making arrangements for local treatment under an anæsthetic if this should not succeed. After the second dose, her pulse rate had fallen to 128, and the tension had greatly increased, the vomiting had ceased, and she was able to keep down copious draughts of milk

and water; there was less breathlessness, and the hæmorrhage had practically ceased. During the 12 hours following she passed no more than about 1 oz. of black clot, her pulse continued steady, and the symptoms of cerebral anæmia began to abate. At the end of another 12 hours hæmorrhage had completely ceased, and I accordingly diminished the dose of adrenalin and cannabis indica to one half of that first given. Within a few hours, however, bleeding again came on, but was at once arrested on going back to the dose originally prescribed. At the end of another 24 hours the dose was again reduced, and this time the hæmorrhage did not recur, and after another 48 hours the mixture was discontinued, there being no further hæmorrhage. The only troublesome results which followed these doses were the secretion of very large quantities of urine, which had to be drawn off by catheter; and much mental confusion with hallucinations, doubtless the result of the Indian hemp.

Convalescence was naturally slow, but quite uneventful; the patient has since had 3 catamenia which were perfectly normal in every way, although during the first one she was kept in bed as a precautionary measure. She has now completely recovered from the anæmia, and is in excellent health.

BELASTUNGSLAGERUNG.

THE APPLICATION OF COMPRESSION IN THE RAISED PELVIC POSITION IN THE TREATMENT OF INFLAMMATORY, ESPECIALLY OF EXUDATIVE, PELVIC AFFECTIONS.

By LUDWIG PINCUS, M.D., &c., Danzig.

(Conclusion.)

IT was stated in the *Archiv* (xxv.) that local hyperæsthesia was favourably affected by compression. In a rude, empirical manner compression was recommended and much used hundreds of years ago to relieve pain. In the *Festschrift* I pointed out how not only the reflex spasm in the muscles, but also the pains in the inflamed parts, were relieved or altogether dissipated. This can now be entirely confirmed.

Nor is this at all surprising. Two factors have to be considered: the pressure itself, and the anæmia, the latter being a consequence of the former. The effect of the pressure, when its constant or vibrating action is exercised upon the diverse plexus of nerves of the abdomen, is in the majority of cases sedative and pain-stilling. Moreover, the anæmia caused by the pressure no doubt depresses the vital energy of the affected parts.

Pressure exercised on larger fields, as just described, confirms the empirical observation of every day in regard to individual nerves (supra-orbital neuralgia) or individual plexus (Frankenhaeuser's "Cervical Ganglion"). In the abdomen the action is facilitated by the fact that here nature has provided the resistance, the vertebral column and the promontory, on the anterior surfaces of which the nervous plexus are distributed.

If the pressure is to be made as intense as possible at once, one must in order to bring the resistance into full play press the interposed intestines upwards towards the diaphragm by slow massage. One can easily recognise that a considerable force has been at work by noticing, after removal of the weight, the configuration which the abdominal wall assumes in a short time. To facilitate examination, however, the external weight should, as I have mentioned, be left in position.

As Funke remarks: "Loops of intestine merely lying in front of the tumour can be massaged out of the way, but not such as are adherent to the tumour. The contents of the latter, whether fluid or gaseous, will be very soon pressed out by the shot bag, and when this has been done the pressure will act directly upon the exudation."

Of course all the varieties of compression which have been mentioned can be used for diagnostic purposes. It must, however, be remembered that external pressure is not of any real use unless the inclined plane is used at the same time, though perhaps at only so moderate an elevation that the pelvis and lower extremities are raised just enough for the venous blood and the lymph to have a slight fall from the pelvis towards the abdomen.

Another important point is that Belastungslagerung affords an excellent method of ascertaining whether a retroflexion of the uterus is fixed or mobile: a question which lies on the borderland of diagnosis and treatment. Indeed, as has already been pointed out, the diagnostic significance of Belastungslagerung in reality always plays on this boundary line. Funke repeatedly mentions the reposition of a retroverted, and especially that of a gravid retroverted uterus. Halban (*l.c.*, p. 140) writes: "One was often under the impression that one had to deal with a fixed backward displacement. Narcosis was, naturally, then often called to our assistance. It proved, however, that when the abdominal walls were quite relaxed, the uterus could easily be brought forward and was not in any way adherent.

“ In such cases, if one introduces a colpeurynter filled with quicksilver, one can almost always, after one or two sittings, draw the uterus forwards without any force, and thus avoid the exertion of attempts at reposition for oneself, the consequent pain for the patient, and the narcosis and its risks for both.”

No doubt every colleague who may hereafter practise *Belastungslagerung* will meet with surprises. For example, a case may have been ascertained by a careful examination to be one of retroflexion with inflammatory complications in Douglas' pouch, and if in order to see whether the intravaginal compression can be borne a quicksilver colpeurynter is introduced, the uterus is set up again in the very first sitting.

Cases of this kind must of course be appreciated in regard to the effect of compression in the reposition of a retroflexed uterus, and Freund, more than anyone, has insisted on this happy result. Intravaginal compression will, without question, be the means chiefly employed for the elevation of a retroflexion of the gravid uterus. Therapeutical success in this respect will be one of the principal acquisitions of the new method ; it is an acquisition of permanent value, and the merit of drawing attention to it is W. A. Freund's. It will in most cases be substituted successfully for reposition in narcosis. As Fritsch very properly remarked (xxxix.) in the conclusion of his address upon vaginal cœliotomies at Aix, “ the compression treatment is a reliable and elegant means of relief, especially in retroflexion of the gravid womb.”

But here also there is no absolute rule ; things do not go so easily in every case. In one instance the author had to apply compression eleven times, for an hour each time, to repose a uterus. In that case the anterior vaginal wall was abnormally short, a condition discussed in the *Festschrift*, and it was not until it had been stretched by the prolonged compression that the abdominal pressure was equal to maintaining the uterus permanently in anteflexion. Funke also

speaks of the good effect of intravaginal compression in stretching an abnormally short anterior vaginal wall, and of its consequent beneficial influence upon the reposition of a retroflexed uterus, and upon the ligamenta vesico-uterina and the retractors of Douglas' pouch ; but these are points that are self-evident and require no argument.

The diagnostic value of *Belastungslagerung* is prominently shown in cases like the following, which are occasionally met with in practice. On examination one finds an apparently fixed retroflexed uterus, sometimes unaccompanied by any distress or pain. The adnexa and uterus seem to form a single mass. Advice is generally sought for some irregularity in the menstrual periods, perhaps also for sterility. By intravaginal compression an apparent reposition is effected without difficulty. Nevertheless the case is not one of retroflexion, at all events, not of fixed retroflexion, but a conglomerated tumour of the tubes situated in Douglas' pouch, and superficially cemented to the uterus.

Funke alludes to the value of the method in facilitating the differential diagnosis between acute hæmatocele and incarcerated retroversion of the gravid womb. Of this I have no personal experience to report. Funke, however, points out that while in hæmatocele intravaginal compression causes or increases pain, in incarceration of the retroverted gravid womb the reverse is the case, and after reposition the tumour is no longer found in the pelvis. He also mentions an important case which was necessarily suspected to be one of malignant tumour, but which the compression proved to be a resorbable exudate : a chronic pelvic peritonitis had caused a nodular tumour in the pouch of Douglas, but in the course of seventeen days the tumour was entirely absorbed and the uterus perfectly mobile.

Ovarian tumours, myomata (Funke), or other growths which, having sunk from the larger into the smaller pelvis, on manual examination appear to be quite fixed there, as in the observation above mentioned, may be raised up again by compression.

Moreover, as I explained in the Festschrift, the value of the method as facilitating the diagnosis and prognosis in cases of exudation is increased by the fact that it enables one to know in an early stage whether there is any pus in the exudation, and whether the case will be one for perforation.

One of the conclusions drawn in the Festschrift (No. 15, p. 58) was: "If in spite of the employment of typical Belastungslagerung any exudate, especially one due to puerperal perimetritis or parametritis," . . . "should not diminish in size, and if though the range of temperature be limited the patient is evidently losing strength, not only is pus present in the exudate, but most probably perforation is about to take place, and must be anticipated by a preparatory incision after an exploratory puncture" (even if such be negative).

Halban is not altogether sound in writing upon this point (*l. c.*, p. 135). "It would therefore seem absolutely imperative to ascertain whether any virulent bacteria are still present in the adnexal tumour to be dealt with. The acquisition of this criterion is not yet absolutely within our powers, and we therefore have rather to rely upon the objective impression, which only too often gives rise to a mistake."

In my experience the required criterion is afforded by the fact above mentioned, that *an exudation does not diminish in size when it contains a virulent pus*. The limits may be drawn closer: Belastungslagerung must always, in the first instance, be looked upon as a test, and whenever possible be commenced after a menstrual period, during which the behaviour of the temperature and the status gynæcologus has been most carefully observed. If during the menstruation there have been slight elevations (0.5° to 1.0°) in the temperature, that does not imply more than that the case must be treated with caution. Under such circumstances, however, one should wait till the menstrual high tide has passed, and till in the subsequent ebb the relaxation of the

tissues of the smaller pelvis has decreased. If the elevations of temperature during the period, though moderate, have been attended with pain, or if there be pain or swelling in the tubes, a milder treatment than intravaginal compression must be instituted, best of all hot irrigation, as recommended by Stratz. Even if from independent reasons one has not the opportunity of watching the course of a previous menstruation, one should still regard the *Belastungslagerung* as a test; as a rule it answers the purpose, and as Fritsch so well says (*l. c.*, p. 470), when carefully watched does no harm.

If the case stands the test it may be given out-patient treatment. Hospital treatment is so far better, in that it is more convenient for combining with the *Belastungslagerung* other factors, such, for example, as hot irrigation, as adjuvants. In old chronic processes, however, the ambulatory treatment is to be preferred; moreover, when the quicksilver-air-colpeurynter is used and the case is well watched, it is free from danger. In this respect, as the method has been made more scientific it has gained in safety, and therefore everyone who employs *Belastungslagerung* in private practice will, as a rule, use the quicksilver-air-colpeurynter.

If there be no pus in the exudate, or, to speak more deductively, if the course be favourable, the size of the exudate will decrease; and often after a few days, after the combined use of intravaginal compression and the other factors of this treatment, the various constituents and the individual organs forming the conglomerate mass become so prominent that the diagnosis is possible without narcosis.

In old, hard, conglomerate tumours, essentially parametritic in their nature, and which, as is well known, are obstinately refractory to other resorbent treatment, *Belastungslagerung* is especially successful. Halban himself states (p. 138) that even after two or three applications of the compression there may be "a complete alteration in the condition found on palpation." This apparently

depends on the fact already mentioned, that it is especially in these cases that the colpeurynter has a good effect in every direction round it (p. 139). Halban also confirms some earlier observations of mine: "It appears to me that the compression treatment may also be of valuable assistance in investigating the pathology of these hard exudates, inasmuch as the slight extent to which they yield to pressure shows with tolerable certainty that one has to do with a chronic indurated œdema, which by its cartilaginous hardness resembles firmly organised hard tissue."

It is a fact, however, that with these old conglomerate parametritic tumours one gets better results, especially subjective results, if one combines hot irrigation with the compression, because, as has been noted in Schauta's Klinik, the adhesions and cords attached to the resorbed mass may cause what I may call "shrinking pains," well calculated to obscure the excellent objective result. Finally, one must not forget that every sufferer from such exudates is exposed to all sorts of accidents and dangers, which are set aside by Belastungslagerung; and when there are no more to be found, one is in a position to deal successfully with the remaining and sometimes really consequent "shrinking pains."

In these cases it is not massage (Halban), but the graduated tamponade that is suitable. At all events, in six cases in which everything else had failed I have had good results from the tampon. The chief and essential point is to keep the parts at rest, as is shown by the previous test use of the air-colpeurynter.

Practice will soon prove to anyone that the treatment of these old chronic exudates of a predominating parametritic character is sooner and more successful, in regard to both objective and subjective results, if that treatment is an ambulatory one, always with all the precautions recommended by the author, so that the patient is never exposed without safeguard and watching to the reactive fluxionary

hyperæmia consequent upon the artificial anæmia. There is no difficulty, with the help of the quicksilver-air-colpeurynter, in preventing any such exposure.

In a discussion on Halban's address on the "Conservative Treatment of Old Pelvic Exudations" in the Vienna Obstetric and Gynæcological Society, which bears closely upon our present theme, Fabricius said that compression treatment was not adapted for large exudations of the kind just spoken of, that incision and search for the purulent focus was the treatment which was indicated.

That is not correct; I repeat what I said in the Festschrift (p. 26): I am convinced from personal observation that circumscribed collections of pus may condense and disappear, leaving merely a slight callosity; indeed, in every case of pelvic exudation one must, *à priori*, start with the opinion that the largest exudations, such as contain pus, may undergo complete involution; and as a rule in such cases one finds that involution is induced by Belastungslagerung.

But should it not be so, and this is the crucial point, it is then—and then only—that incision is indicated. If by incision one could obtain quicker and thereby more certain results it would be silly to write against it; but that is not the case. There is a want for other methods of treatment, and none more effectual than Belastungslagerung has been found. v. Winckel, in his Textbook, says (p. 719), "Even in very large exudations one must count upon complete resorption," and this should always be borne in mind above everything (*cf.* R. v. Braun's remarks in the discussion (IX.).

It has already been shown that the view taken by von Erlach cannot be accepted as correct. He said (*Ibid.*): "If there is any suspicion of suppuration, the compression treatment is, *à priori*, to be excluded." Since Belastungslagerung has been introduced into gynæcological therapeutics there is no longer any such indication as "suspicion of suppuration." One has to reckon with "actual suppura-

tion," and for this statement the author accepts entire responsibility. The criterion already repeatedly laid down is at everyone's disposal, and runs : *If the compression is not beneficial, pus—one may indeed say virulent pus, is present in the exudation ; if the compression is ineffectual, and if at the same time, even with only moderate feverish changes, the patient loses strength, perforation is imminent.*

It is satisfactory to notice that in closing the discussion Schauta insisted on the importance of compression in these old "stony-hard" perimetritic and parametritic exudates, saying : "In these cases particularly the compression treatment seems to fill a gap in our therapeutics."

After the foregoing searching discussion, there is but little to be said on the remaining indications. All inflammatory, especially all exudative, processes in the parametrium or in the pelvic peritoneum are grateful objects for Belastungslagerung ; but no rule is absolute, even here. It has been explained above that sometimes this and sometimes that complementary factor stands in the forefront of the attack, and that a less dangerous, and at the same time more successful, ambulatory treatment is rendered possible by the use of the quicksilver-air-colpeurynter and the Staffeltamponade. It may here again be pointed out that our method in no wise impugns the importance of the therapeutic change between anæmia and fluxion, but implies that sudden extremes should be avoided until careful observation has proved that exacerbations are not to be feared. We are concerned to cure, *cito tuto et jucunde*.

I have already repeated the statement made in the Festschrift, that in applying the tamponade, care must be taken to exercise compression in the neighbourhood of Frankenhaeuser's ganglion. This precept proves itself with the certainty of an experiment if intravaginal compression is employed in the treatment of a certain form of dyspareunia, affecting women, in whom some degree of hysteria is present, but no objective palpable lesion is to be found. As Funke remarks (p. 279) : "One finds a point in the pos-

terior vaginal vault not larger than the tip of the finger, a touch upon which elicits a loud scream from the woman."

The method is also useful in that form of dyspareunia which depends on the tenderness, inflamed and thickened retractors, or inflammatory contracting processes in the parametrium; such, for instance, as result from cervical lacerations.

I may here also allude to the successful treatment of cases of spastic contraction of muscles in the pelvis, which are occasionally met with in practice in erethismic and erotic women, and in those who are hysterical by nature, or have become so from prolonged use of preventives to conception. I have already discussed this affection in an earlier work (XXV.) under the title of "Myodynia intrapelvica." It is characterised by noticeable spastic contractions in the pelvic muscles (and reflex contractions in those of the abdominal wall), the former on being touched (coitus) become very painful indeed, so much so as finally to lead to vaginismus. In the anamneses the use of that unholy thing, the occlusive pessary, and of coitus interruptus, has a predominant part. The hysteria seems rather result than cause, but the point needs further confirmation.

Of course, *restitutio ad integrum* is by no means to be obtained by Belastungslagerung in every instance. Coe, (XLI.) years ago pointed out that the strongest pressure that could be exercised through the posterior vaginal vault was not enough to separate parts cemented together, and that intravaginal pressure, therefore, was not capable of separating adhesions. This, however, is not correct except as regards adherent organs movable as a whole. If there is any point fixed to the bony pelvis stretching will take place, as can be proved clinically. At all events, by Belastungslagerung one can alleviate any pains in the residual exudation; ovaries attached to the edge of the pelvis are loosened and become less painful, &c., and, without exception, the reflex fluxion to the uterus is diminished, if not done away with. The cure, if not truly anatomical, is at all events a symptomatic one.

Our object is attained if the function of the organ harmonises with the good health of the individual. As Virchow said, "To be well means that no part of the body is more distinctly felt than the rest."

In many cases *Belastungslagerung* induces such perfect resorption that even the most thorough combined palpation can detect nothing in any way morbid.

Another consideration of fundamental importance is revealed by comparing the symptomatic cures obtained by operative measures, and those due to *Belastungslagerung*. To the eight instances of pregnancy after the symptomatic cure of adnexal disease, recorded in the *Festschrift*, I can now add another. In four instances there had been bilateral perisalpingitis and perioöphoritis; in two a tubal tumour on the left side; once inflammation in the ligaments on the right side, and in three bilateral perimetritis and parametritis. This will explain the perseverance and constancy with which I have striven to get the method more extensively used.

Even when the method is not entirely successful nothing is lost, but a good deal gained, merely in the fact that one has much greater assurance in recommending an operation either of utility or urgency. And in many instances in hospital practice in which "unfitness for work" is the prominent indication, *Belastungslagerung* prepares the conglomerate tumours for the operation finally to be decided upon. It is like Eduard Martin's handgrip in obstetrics; even though that fail, the head, though not born spontaneously, nevertheless becomes engaged in the proper way for expression by v. Winckel's method.¹

In private practice one is not justified in operating for inflammatory pelvic affections, especially not for exudative inflammations, until treatment by *Belastungslagerung* has been tried and failed.

It does not seem necessary to add more than a short

¹ Cf. Pincus, *Abhandl. Berliner Klinik*, Heft 92.

summary and review of the most important cases that have come under my notice. The complete consideration of the whole in their clinical aspect may be reserved for the present.

Between 1886 and 1900, 229 cases came under treatment. This relatively small number shows that in the earlier years, during which it was still more or less on trial, the method was only employed occasionally in specially selected cases, and, even later on, generally only when simpler measures, for which the patients were less dependent upon the doctor (hot irrigation, baths, &c.), were not rapidly enough efficacious. Importance, however, was, *à priori*, always attached to the employment of combinations of approved value. These have been already thoroughly discussed.

The diagnosis throughout was established on the scientific principles of Freund and v. Winckel, and the cases treated were as follows :—

Parametritis (exudates and cord formations)	23
Perimetritis (cord formations)	36
Pelioperitonitis (diffuse form, affecting many organs, adhesions and small exudations)	47
Perioöphoritis-perisalpingitis (circumscribed form affecting only the ovary or the tube)	21
Painful and generally enlarged ovaries fixed to the brim of the pelvis (thirteen times on the left side)	18
Retroversio-flexio uteri (fixata twenty-one, mobilis twelve)... ..	33
Tubal tumours (pronounced chronic stage)	19
Cicatrices in the cervix and vaginal roof extending into the parametrium	11
Dyspareunia (thickening of the sacro-uterine ligaments), v. text	13
Myodynia intrapelvica sexualis	8

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In the cases here referred to, in some exceptional instances the affection was chronic and without fever. The temperature was regularly taken, especially during the catamenia, and no treatment was applied at those times. Fever was regarded as a danger signal, fever with pain as

a contraindication. Moreover, if after three or four sittings no decided improvement appeared, or if the tumour increased in size, compression was considered to be contraindicated. Ambulatory treatment was invariably conducted with especial caution, and the women, when allowed to go away after the compression, were invariably fitted with a moderately distended air pessary with the graduated tampon, or in the simplest cases with Meyer's india-rubber ring.

The duration of the treatment varied between five days (parametritis) and two months. The most obstinate cases were two exudates in the parametrium, which, from their eccentric position, and the fact that with the return of the appendicitis the exudate enlarged also, were doubtless to be referred to an appendicitis. The treatment lasted for almost four months, but was by no means regular.¹

In twenty-three instances (10 per cent.) the treatment had to be interrupted, or altogether abandoned (4 per cent.) because of pain or fever, and this shows that the method is not universally applicable. Its employment demands complete knowledge and earnest circumspection, and then yields excellent results. It must, however, be pointed out that a higher percentage of the cases could undoubtedly have been successfully treated in the hospital. There are matters in private practice that cannot be exactly estimated, and yet cannot be at all neglected.

In the 17 cases of disease of the pelvic peritoneum, although there were extensive adhesions, subjectively the

¹ Wolff (Olshausen's Klinik) also saw good results in appendicitis which are worth notice. An exudation that had existed for six years, caused constant pain and frequent confinement to bed, and for which many physicians had for years tried most various forms of resorptive treatment without much relief, was, after thirteen applications of compression, the only treatment the patient had in the hospital, dissipated except a very slight residue. "The most important point, however, was that the subjective condition of the patient, who had previously been a constant invalid afflicted with pain, became and remained excellent." . . . This was at all events an encouragement to further trial, and shows that in practical therapeutics there is no universal rule.

cure was complete ; in five instances only massage, afterwards employed on account of sterility, was without perfect success in dissipating the residua. In four instances, although the objective cure was complete there was nothing pathological to be detected by palpation ; there was some persistent pain. Apparently these were not merely adnexal lesions but some circumscribed pelio-peritonitis, which it would have been difficult to cure even by extirpating the adnexa. Prolonged hot irrigation, Priessnitz' compresses and belladonna suppositories finally gave relief. In one case also extensive use was made of the knee-breast position.

In four instances of parametric exudation after the failure of *Belastungslagerung*, an incision had to be made and enlarged by blunt dissection with the fingers ; three times from the vagina, once above Poupart's ligament.

Cicatrices left by laceration of the cervix and vaginal roof, often extending deeply into the parametrium, were, without exception, much benefited. The relaxation and extension were often so complete that there was nothing left palpable even by bimanual examination.

We may conclude our lucubrations with the words Wolff wrote from Olshausen's Klinik : " The experiences already published, and that reported in this work, show that the introduction of compression into gynæcological therapeutics constitutes a material advance in simplicity and harmlessness ; when circumspectly and carefully employed, it surpasses all other resorbent measures in the rapidity of its success, and is efficacious in cases in which other means leave one in the lurch. Compression treatment must, from the observations here recorded, therefore, be most warmly recommended for dealing with chronic inflammatory affections of the female pelvic organs, especially for exudations.

CONCLUSIONS.

(1) *Belastungslagerung* is to be accepted as a successful and typical method of treatment which fills a gap in gynæcological therapeutics.

(2) It forms in various ways an appropriate substitute for narcosis for diagnostic purposes, and is therefore to be welcomed as a typical diagnostic method. The diagnostic and therapeutical results pass indefinitely into one another.

(3) The fundamental type of Belastungslagerung is formed by the inclined plane (*plauum inclinatum*), and compression (*Belastung*)—factors which are each of complementary significance. An adjuvant in regard to the maintenance of the bodily strength is found in methodical respiratory gymnastics.

(4) The inclined plane, used alone, is less effective but never harmful; it successfully paralyses the prejudicial influence of deficient bodily nutrition upon resorption. Compression is never to be employed except in association with the inclined plane. Either factor may be used continuously or with intermissions. Compression may be intravaginal or abdominal, but is better when both forms are combined.

(5) The peculiar field for Belastungslagerung is formed by those exudations of pronouncedly chronic nature which do not exhibit any rises in temperature, even during menstruation. It also, according to W. A. Freund, offers the best means of reposing a retroflexion of the gravid womb.

(6) In exudates in the parametrium and all such exudative processes as are situated near the pelvic floor, intravaginal compression by means of the quicksilver colpeurynter is to be employed; an adjuvant is found in abdominal compression. When exudates and similar lesions are situated high up in the pelvis, intravaginal compression is rather equivalent to a resistance interposed to elevate and fix the organs in a position of rest (air-colpeurynter, Staffel-tamponade), and it is then the adjuvant, while the abdominal compression (shot bag, potter's clay) forms the active therapeutical agent.

(7) Belastungslagerung, therefore, is not identical with compression either with the shot bag or with the quicksilver-air-colpeurynter, but a method which claims and utilises

both these modifications as integral factors, of itself of notable complementary efficacy.

(8) Ambulatory treatment is to be accepted as the ruling principle in dealing with old chronic pelvic exudations. It may be carried out without danger and in an effective scientific way, by means of the author's quicksilver-air-colpeurynter. A complementary factor is found in the elastic abdominal bandage.

(9) The scientific postulate of *Belastungslagerung* is fulfilled by the quicksilver-air-colpeurynter: gradual compression, gradual relaxation. This instrument also permits the use of colpeurynter massage, facilitates the general use of the method and is indispensable to every gynæcologist.

(10) The surgical treatment of chronic pelvic affections is not justifiable until *Belastungslagerung* has been tried.

(11) A negative result from the use of *Belastungslagerung* is the most reliable scientific criterion that virulent pus is present in an exudation, and, in private practice, this criterion only gives the indication for surgical treatment.

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REVIEWS.

TWENTY-FIVE YEARS OF TEACHING ACTIVITY, a tribute to Professor von Rein from his pupils and a record of his life and work. Large Quarto, with Portrait, Plates and Illustrations. Pp. 368. Kiew, Russia, 1900.

This work is not quite on the lines of the *Festschrift* so commonly presented to a German professor on the completion of his 25th or 50th year of academic life or other suitable occasion; it is, rather, based on Professor v. Rein's work as Director of the Obstetric and Gynæcological Hospital and School at Kiew, and is, as it were, a farewell token of the congratulations and good wishes of those who have studied under him there, on the occasion of his appointment to a similar post at the Military Academy of Medicine at St. Petersburg. The subject matter is divided into four sections: the first describes the Obstetric and Gynæcological Clinic at Kiew, as it has been built up and developed by Professor v. Rein; the second contains a review of the work of the Professor and his pupils; the third is an index of all the memoirs issued from the clinic during the sixteen years for which he occupied the professorial chair; and the last is a list of all his addresses and published works, including the Proceedings of the Society of Obstetrics and Gynæcology at Kiew, from 1887 to 1899, forming twelve volumes, each of two parts. The book is thus rather a record of v. Rein's work and of its active and permanent influence upon his pupils than like the usual *Festschrift*, a collection of original articles specially written in honour of their master by his pupils and dedicated to him on a special occasion.

The direction in which v. Rein's life-work would lie was foreshadowed in his Dissertation for his Degree published in St. Petersburg in 1896, for he chose as his subject "The Removal of Fibro-myomata by Abdominal Section." It is significant that the mortality of all cases then published was 60·72, while that of enucleation was not very much less, being 55·0. v. Rein wrote and worked much on Cæsarean section, devoting himself especially to improving the methods of removing the pregnant uterus as regards loss of blood. Under Professor Waldeyer of Strassburg, he studied the development of the mammary glands in the embryo and the maturation, impregnation and early changes in mammalian ova, and under Ranvier of Paris, the sources and distribution of the nerves of the uterus. He published many papers on asepsis and anti-sepsis, and his own methods were so rigidly observed that his mortality for uncomplicated abdominal sections was only from 1 to 3 per cent. Without entering into details, we may say that his work as recorded in this book covers the whole field of obstetrics and gynæcology, both as to theory and practice. To him in no small measure was due the increase in the number of students of medicine at Kiew, from 416 to more than 1000 while he was there. Owing to his influence and exertions the old Frauenklinik at Kiew, dating from 1844, was rebuilt in 1888, and by various additions in 1893 and 1898, is now completely up to date, both for midwifery and the diseases of women. The material at his disposal for clinical purposes increased enormously, and his lectures and classes for midwives, students and graduates were up to the best standards.

In 1881, Professor v. Rein read a paper on the development of the breasts in the Anatomical Section of the International Congress in London, and he has spoken and read papers at several similar meetings since then. He is still full of energy, and in the wider sphere at St. Petersburg where he is now Professor, may be confidently expected to continue his excellent work.

F. E.

INTRODUCTION À L'ÉTUDE CLINIQUE ET À LA PRATIQUE DES ACCOUCHEMENTS : Anatomie, Présentations et Positions, Mécanisme, Toucher, Manœuvres, Extraction du Siège, Version, Forceps. Par le professeur L. H. FARABEUF, et le docteur HENRI VARNIER ; Préface par M. le professeur A. PINARD. Dessins démonstratifs de L. H. FARABEUF, donnant avec les répétitions nécessaires 362 figures. Nouvelle édition, revue et corrigée par le professeur L. H. Farabeuf. Super royal 8vo (11 + 7.5 in.), pp. x. + 478. Paris : G. Steinheil, n.d. Price, 14 francs.

The late Professor Varnier was interne to Professor Pinard at the Lariboisière Maternité and followed him to the Baudeloque. He watched and verified all the anatomical experiments which Professor Farabeuf made the basis of his figures, and which were carried out on what he describes as "natural mannikins," bodies embalmed with glycerine and therefore plastic, and whenever possible those of eclamptics dying in labour, or just delivered in the final coma. In the very eulogistic preface which Professor Pinard wrote to the first edition of this book in 1891, he says that the chief difficulty in the clinical teaching of obstetrics is the student's ignorance of indispensable preliminary anatomical and mechanical knowledge, and that it is not superfluous for the authors to have given a text lucid enough to be understood even without figures, and figures so accurate and instructive as to make the text seem unnecessary.

The book has long been out of print, and was so highly appreciated in France that the few copies occasionally met with commanded high prices. A new edition was wanted, and owing to the lamented death of Professor Varnier, the revision has been undertaken by Professor Farabeuf with the support of Professor Pinard. This revision was particularly necessary in regard to the chapter on the forceps, as during the fifteen years since the book was composed, owing to the practice of symphyseotomy and Cæsarean section, the

treatment of labour arrested in the superior strait has been much changed and the high application of the forceps become less and less resorted to.

The scope of the work is limited, as indicated by the title, but we can endorse Professor Pinard's eulogium of text and illustrations. With many of the latter every obstetrician will be familiar, as they have been adopted into one manual after another. It is a real pleasure to study them, for they are drawn by one who is both an anatomist and an artist. The text is essentially didactic with intentional repetitions, but is also a record of practical research, and is concise considering all it contains.

BEITRÄGE ZUR ANATOMIE DER TUBENSCHWANGERSCHAFT.
VON DR. FRITZ KERMAUNER, Assistent an der Uni-
versitäts-Frauenklinik zu Heidelberg. Royal 8vo,
pp. 137, with 44 Illustrations. Berlin : S. Karger, 1904.
Price 4s. net.

This excellent monograph on the anatomy of tubal pregnancy is based on 40 cases operated upon by von Rosthorn or his assistants, 36 at Graz, and 4 at Heidelberg. Though for various reasons some other specimens obtained during the same period were not available for his researches, the author is justified in attributing greater value to conclusions drawn from a series so connected, than to any drawn from specially selected cases. His investigations extended to the placenta—when possible to its entire extent ; to sections, sometimes serial in order, of the tube, especially of the uterine and abdominal portions ; to the ovary on the same side ; and when desirable to the uterus and adnexa of the other side ; to the mole and to the capsule of the hæmatocele. The results, illustrated by most instructive, explanatory, and partly diagrammatic, drawings, and by abbreviated anamneses, form the earlier part of the work. One case was bilateral, and he points out that the fact that in 25 cases the tube affected was on the right side and 14 on the left, implies nothing, as the statistics of larger

numbers show that both tubes are equally liable. The seat of the ovum is described as ampullary in 18 instances, isthmic in 19, not exactly determined in 4. The discrepancies of statistics on this point are no doubt due to the limit of the ampullary portion being quite arbitrary, even in the non-pregnant tube, a pregnancy that would be termed ampullary by one observer being called isthmic by another.

Of the 19 isthmic pregnancies, 10 ended in rupture, 9 in abortion. From all the cases he concludes that the tendency to abortion rather than rupture varies with the distance of the seat of the ovum in the tube from the uterus, and *vice versa*. The diagnosis was possible macroscopically in 16 cases, microscopically in 25, but sometimes only with difficulty. In 11 cases only was there any definite period of amenorrhœa before the onset of hæmorrhage. Apart from typical cases of rupture, bleeding from the genitals, either continuous or intermittent, had occurred for weeks, even for 3 months, before special indications led to operation; in 25 instances blood was found in the uterine end of the tube; bleeding from the genitals, especially when profuse, comes no doubt from the uterus, but may be in part derived from the tube.

When the ovum buries itself in the tube wall, owing to the tenuity of the mucosa, it finds itself at once in the muscularis, and even from the beginning of pregnancy the latter forms a membrane, shutting the ovum out of the lumen of the tube. For this membrane Kermauner accepts Petersen's name, "*membrana capsularis*"; it contains no decidual cells, and is in no sense a decidua reflexa. Remains of this *m. capsularis* were found in 35 out of 36 cases. The thinning of the tube wall at the seat of the ovum, especially of the site of the placenta, and the formation of isolated protrusions, may be due to the action of foetal elements (Aschoff), or to extravasation of blood owing to stasis and subsequent destruction of the tube wall, but both are secondary processes, and have nothing to do with the nidation of the ovum.

The term columnar implantation (Werth), that is the settlement of the ovum in a fold of the tube, should be abandoned, as the fact has not been demonstrated, and certain secondary processes can cause its apparent occurrence. Nor has the nidation of the ovum in a diverticulum of the tube been proved in a single case. In only 6 of the 41 tubes examined could Kermauner find unmistakable decidual changes, generally at the uterine side of the ovum. Even as regards the formation of decidua in the uterus there are too many negative cases for it to be laid down as certainly demonstrable.

In regard to the ætiology, Kermauner points out that a certain connection between salpingitis and tubal pregnancy must be accepted as proved, and that the simple mechanical theory, of which indeed no absolute proof has been given, must, therefore, at all events undergo some restrictions.

DIE BIOLOGISCHE BEDEUTUNG DER EIERSTOECKE NACH ENTFERNUNG DER GEBÄERMUTTER : experimentelle und klinische studien von Dr. LUDWIG MANDL, Privatdozent fuer Geburtshilfe und Gynaekologie, und Dr. Oskar Buerger, I. Assistent der ersten Frauenklinik, an der Universitaet in Wien. Mit 6 Abbildungen und 14 Kurven im Text sowie 13 Tafeln im Anhang. Royal 8vo, pp. 4 and 240. Leipzig und Wien ; Franz Deuticke, 1904. Price 7 marks.

This important monograph is based upon experiments on rabbits and apes, which proved that after the removal of the uterus the ovaries preserved their function to some extent, but not completely ; degenerative processes (atresic and cystic degeneration of the follicles, &c.) becoming established, so that by degrees the function was lost. The authors also had at their disposal the rich material of Schauta's Klinik, 550 cases of hysterectomy, of which 405 were followed up and examined by the authors themselves, or by some other physician, as to the presence and intensity of the menstrual wave, the occurrence and

severity of omission symptoms and the time of their onset after the operation, the degree of sexual desire and enjoyment remaining, the alterations in body-weight, in memory, power of recollection, flow of spirits, and finally the physical change in the external genitals and vagina. In all these respects the condition of those women who still possessed one or both ovaries was better than that of those who had lost both. On the other hand it seemed that, not infrequently, those of the former class suffered sooner or later in the same way as the others, probably because the ovarian circulation had been injured by the operation; moreover, cystic and even malign degeneration of the unremoved ovaries was not uncommon. The authors give curves of the temperature, pulse, blood-pressure and muscular power in three healthy women, showing the well-known form before, during, and after menstruation. In five women completely castrated there was no such wave; in only three out of six, who still had ovaries but no uterus, was there any wave, so that in the other three the ovarian function was already inactive. The cases arranged in tables are convincing enough in spite of such a lapsus calami as at the bottom of page 59, where a displaced entry of *Virgo, Libido und Voluptas unveraendert Koitus schmerzlos*, is appended to a case of a woman who is credited with 1 partus, 3 abortus.

The work is, however, a valuable contribution to the evidence in favour of conservation of the ovaries in hysterectomy, total or supravaginal, abdominal or vaginal.

DIE CYSTOSCOPIE DES GYNAEKOLOGEN. Von Privatdozent Dr. WALTER STÖECKEL, Oberarzt an der Universitaets-Frauenklinik zu Erlangen. Mit neun farbingen Tafeln und vielen Abbildungen im Text. Demy 8vo, pp. x. and 322. Leipzig: Breitkopf und Haertel, 1904. Price, 8 marks.

Dr. Stoeckel has recently become Oberarzt at the Charité Frauenklinik at Berlin, but he developed his interest in cystoscopy at Bonn under Professor Fritsch, to whom he dedicates his book. It was at the Bonn Frauenklinik that

the diseases of the uropoietic system in women were first seriously studied in Germany in connection with gynæcology. The bearing of cystoscopy upon the diseases of women has recently been much more recognised; this means of diagnosis has, indeed, a much wider field in women than in men. Urinary diseases offer conditions in the former that do not exist in the latter, and genital affections in women lead to changes in the ureters and bladder that have no analogues in man. Moreover, diseases of the bladder tend to fall under the observation of gynæcologists, because they are accompanied by symptoms which, rightly or wrongly, the patients associate with their genital organs. More than half of the book is taken up with describing cystoscopes for examination, for catheterisation of the ureters, for operation, for irrigation (washing the prism), and for photography; the bladder phantom for practise, and other apparatus; and the technique itself and the descriptions are so detailed and clear that they will be most useful to any gynæcologist for self-instruction. Stoeckel, on the whole, prefers Nitze's instrument to Caspar's, and recommends the combination devised for examination, irrigation, and catheterisation of the ureters, an expensive instrument costing nearly £7—a sum serious to any but specialists.

After insisting on asepsis and antiseptics, and the dangers of catheterisation of the ureters, Stoeckel, in the last six chapters, describes the results of cystoscopy in such pathological conditions of the urogenital system as vesical affections, fistulæ, and injuries of the urinary passages. The book is extremely well printed and illustrated, the coloured plates being beautifully executed.

ELEMENTS OF GENERAL RADIO-THERAPY FOR PRACTITIONERS. By Dr. LEOPOLD FREUND, Vienna. Translated by G. H. LANCASHIRE, M.D.Brux., &c., Assistant Physician to the Manchester and Salford Hospital for Skin Diseases. With 107 illustrations in the text and one plate. Supplemented by NOTES ON INSTRUMENTATION by CLARENCE A. WRIGHT, F.R.C.S., &c., Member

of the Roentgen Society. With 86 illustrations. Royal 8vo, pp. xxii. + 538 + 60. London: Rebman, Ltd. Price: cloth, 21s; half bound, 25s. net.

The author, who was recently granted the "venia legendi" for radiology, includes under radiotherapy the application of any form of radiation to the treatment of disease; that is to say, electro-magnetic, heat, light and ultra violet rays, and also Kathode, Roentgen, *glow-worm (!)* and Becquerel rays, and those emitted by such substances as radium and polonium. The subject is comparatively so new that most of the knowledge acquired about it is scattered throughout the publications that have appeared during the past seven or eight years, and this book will be welcomed as a comprehensive summary of what is known on the matter, made by one who has been consistently working at it for several years, and who, as regards the Roentgen rays, is an acknowledged authority. As he presupposes but little knowledge on the subject on the part of the reader, his first chapter of over eighty pages is devoted to the Elements of Electricity. The second deals with High Frequency Currents, the bactericidal, desiccating and antipruritic effects of which, though real, he does not consider so pronounced as those of other methods. The third chapter gives the details of treatment with the X-rays, which he considers indicated in diseases of the hair and hairy skin, in ulcerations, acute and chronic exudative dermatitis, morbid changes in the blood-vessels and progressive disturbances in the nutrition of the skin. The Becquerel rays have for him but a scientific interest at present. In the last chapter on Heat and Light Rays, Finsen's concentrated arc light is the most interesting part of the book and seems to offer the widest field for success; success which Freund attributes less to the bactericidal action of light than to inflammatory processes and lasting hyperæmia induced in the diseased area. In this chapter there are a few pages on treatment by sunlight. The appendix is a well illustrated eclectic catalogue of instruments by various makers.

A SYSTEM OF PHYSIOLOGIC THERAPEUTICS. A Practical Exposition of the Methods, other than Drug-giving, useful for the Prevention of Disease and in the Treatment of the Sick. Edited by SOLOMON SOLIS COHEN, A.M., M.D. Eleven volumes. Vol. vii., MECHANOTHERAPY AND PHYSICAL EDUCATION, including Massage and Exercise, by JOHN K. MITCHELL, M.D.; and Physical Education by Muscular Exercises, by LUTHER HALSEY GULICK, M.D. Large 8vo, pp. 420. London: Rebman, Limited. Price 12s. 6d.

The frequent abuse of massage by unauthorised or unqualified persons, its exploitation under some fanciful name as an exclusive form of treatment, and the indifference of some physicians to the details of the manipulations they may order, make it very desirable that the medical profession should have a clear and explicit statement of what can and cannot be done by massage, and how its ends are accomplished. Such a statement Dr. Mitchell gives us with very great authority, for as lecturer on massage at the Orthopædic Hospital he has had wide experience in teaching the nurses and pupils of that institution. Moreover, in the descriptions of the movements and in the directions for carrying them out, simplicity and exactness are guaranteed by their having stood the test of use in instruction. Dr. Gulick's scientific views on the correlation of the development of the race and that of the individual, and his long experience in physical education, are well known, and, as might be expected, his consideration of education and remedial therapeutics is precise, rational and practical.

In addition to the subjects in the title, this volume contains chapters on Orthopædic Apparatus, by Dr. James K. Young; on Corrective Manipulations in Orthopædic Surgery, including the Lorenz Method of Reducing Congenital Dislocation of the Hip; and one on Physical Methods in Ophthalmic Therapeutics, by Dr. Walter L. Pyle, of peculiar interest, and most instructively illustrated.

PUBLICATIONS RECEIVED.

FROM ARCHIBALD CONSTABLE AND CO., LTD., LONDON :

Clinical and Pathological Observations on Acute Abdominal Diseases. The Erasmus Wilson Lectures, 1904, by EDRED M. CORNER, B.Sc.Lond., M.A., M.B., B.C.Cantab., F.R.C.S.Eng., Surgeon to Out-patients, St. Thomas's Hospital, &c., &c. Demy 8vo, pp. 98, 1904. Price 3s. 6d. net.

The Surgery of the Diseases of the Appendix Vermiformis and their Complications, by WILLIAM HENRY BATTLE, F.R.C.S., Surgeon to St. Thomas's Hospital; Hunterian Professor of Surgery at the Royal College of Surgeons of England, &c., &c.; and EDRED M. CORNER, Assistant Surgeon to the Great Ormond Street Hospital for Sick Children, Erasmus Wilson Lecturer at the Royal College of Surgeons, &c., &c. Demy 8vo, pp. xii. and 208, 1904. Price 7s. 6d. net.

FROM W. AND A. K. JOHNSTON, LTD., EDINBURGH AND LONDON :

MANUAL OF GYNÆCOLOGY, by D. BERRY HART, M.D., F.R.C.P., F.R.S.Edin., Lecturer on Midwifery and Gynæcology, School of the Royal Colleges, Edinburgh, &c., &c., and A. H. FREELAND BARBOUR, M.A., B.Sc., M.D., F.R.C.P., F.R.S.Edin., Lecturer on Midwifery and Diseases of Women, School of the Royal Colleges, Edinburgh, &c., &c. Sixth Edition. Demy 8vo, pp. xxxiv. and 736, with 12 lithographs and 359 woodcuts, 1904, price 21s.

FROM H. K. LEWIS, LONDON :

Deaths in Childbed, a Preventable Mortality; being the Milroy Lectures delivered at the Royal College of Physicians, 1904, by W. WILLIAMS, M.A., M.D., D.P.H.Oxon, Medical Officer of Health to the Glamorgan County Council, &c., &c. Demy 8vo, pp. vi. and 99. Price 2s. 6d. net.

FROM FRANK F. LISIECKI, NEW YORK :

The Surgical Treatment of Bright's Disease, by GEORGE M. EDEBOHLS, A.M., M.D., LL.D., Professor of the Diseases of Women in the New York Post-Graduate Medical School and Hospital; Fellow of the New York Academy of Medicine and of the American Gynæcological Society; Honorary Fellow of the Surgical Society of Bucharest, &c. Royal 8vo, pp. iv. and 338, 1904.

FROM SIMPKIN, MARSHALL, HAMILTON, KENT AND CO., LTD., LONDON ;
CORNISH BROTHERS, BIRMINGHAM :

On the Sterilisation of the Hands; a Bacteriological Enquiry into the Relative Value of the Various Agents Used in the Disinfection of the Hands, by CHARLES LEEDHAM-GREEN, M.B., F.R.C.S., Surgeon to Out-patients, Queen's Hospital; Assistant Lecturer in Bacteriology, University of Birmingham, &c. Demy 8vo, pp. 102, 1904. Price 2s. 6d. net.

FROM J. WRIGHT AND CO., BRISTOL; SIMPKIN, MARSHALL, HAMILTON,
KENT AND CO., LTD., LONDON :

Our Baby: for Mothers and Nurses, by Mrs. J. LANGTON HEWER. Ninth Edition, Revised, 1904.

TRANSACTIONS OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS, vol. xvi., for the year 1903. Royal 8vo, pp. lviii. and 483. New York, 1904.

TRANSACTIONS OF THE NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY, 1904, Fasciculi iv. & v.

TRANSACTIONS OF THE CANADIAN INSTITUTE:—

The Palæochemistry of the Ocean in Relation to Animal and Vegetable Protoplasm, by A. B. MACALLUM, M.A., M.B., Ph.D.

TRANSACTIONS OF THE ITALIAN SOCIETY OF OBSTETRICS AND GYNÆCOLOGY :
Giuseppe Vespa e la Clinica Ostetrica di Firenze, discorso pronunciato dal
Professor ERNESTO PESTALOZZA, all' inaugurazione dei locali rinovati
della Clinica, 1904.

We have to acknowledge, also, the following Pamphlets
and Reprints :—

Dal Dottore GIUSEPPE CRISTALLI, Napoli, 1904 :
A proposito delle nuove vedute di Zweifel sulla prevenzione della febbre
puerperale.

von ELIS ESSEN-MOELLER, Lund :
Beitrag zur Kenntniss von Hæmatometra in Nebenhorn.

von A. KOBLANK, Berlin :
Ueber entzuenliche Erkrankungen der Eileiter.
Erkennung und Behandlung der Eierstockskranheiten.
Kraniotomie und Embryotomie.

By H. MACNAUGHTON-JONES, M.D., M.Ch., M.A.O. (Hon. Causâ), &c., &c. :
Tuberculosis of the Female Genitalia. A Brief Résumé of our Present
Knowledge.
Accessory Fallopian Tubes and their Relation to Broad Ligament Cysts and
Hydrosalpinx.
Sclerosis and Cirrhosis of the Ovaries as Causes of Adnexal Pain and other
Symptoms.
The Treatment of Fibroid Tumours of the Uterus.

By CHARLES P. NOBLE, M.D., Philadelphia :
Some of the More Unusual Results of Movable Kidneys.
Invasion of a Fibromyoma of the Uterus by an Adenocarcinoma, which by
Metaplasia had Assumed the Appearance of a Squamous Cell Carcinoma.

And also copies of the following works by our recently
elected Fellow, Professor Giovanni Calderini, Director of
the Royal Obstetrical and Gynæcological Clinic at Bologna.

Saggio di pratiche osservazioni intorno alla aspettazione nelle operazioni
ostetriche, Torino, 1865.

Relazione clinica e statistiche della Clinica Ostetrica di Torino, Torino, 1871.

L'istituto ostetrico di Parma, Torino, 1873.

Illustrazione di un feto umano abortivo, Torino, 1874.

Fibro-mioma uterino esportato felicemente collo schiacciatore lineare; and
Le dimensioni del feto negli ultimi tre mesi della gravidanza, Torino, 1875.

Primo rendiconto del R. Istituto ostetrico di Parma, 1877.

Dispareunia da vaginismo, Torino, 1878.

Secondo rendiconto del R. Istituto ostetrico di Parma, anni 1875-1877,
Torino, 1879.

Ranula in un neonato, Milano, 1881.

Le precauzioni antisettiche nella pratica ostetrica, Torino, 1881.

Sulla questione dell' insegnamento pratico della ginecologia e della pediatria,
Milano, 1881.

Decollazione colla fune, Milano, 1881.

Una cretina ed una microcefala nell' Istituto ostetrico di Parma, Milano, 1882.

Contributo alla diagnosi delle mostruosità del feto ed alla eziologia dell'
idramnios, Milano, 1882.

Esportazione dell' utero dalla vagina, Milano, 1882.

Alcuni vizi congeniti dell' apparato genitale, Bologna, 1882.

L'Ostetricia e la Ginecologia nelle Università tedesche, Roma, 1882.

Note cliniche di ostetricia; and Note Cliniche di ginecologia, Torino, 1882.

L' esame del latte delle nutrici nella pratica medica coll' apparecchio di
Conrad, Parma, 1882.

I bacini asimetrici, Parma, 1882. Uterus septus duplex, Parma, 1887.

- Embriotomia, una decollazione e una detroncazione coll' uncino a chiave di G. Braun, Parma, 1887.
- Distocia per idrocefalia, Milano, 1887.
- Un' altra detroncazione eseguita coll' uncino a chiave di Braun, Parma, 1888.
- Cellule simili a quelle della decidua, Torino, 1888.
- Di alcune laparotomie (37) state eseguite nell' Istituto ostetrico-ginecologico di Parma, 1889.
- Il quinquennio 1884-85—1888-89 nel R. Istituto ostetrico-ginecologico di Parma, 1889.
- Comunicazioni e dimostrazioni fatte al Congresso di Berlino, Torino, 1890.
- L'accouchement prématuré artificiel, ses indications et méthodes, Berlin, 1891-92.
- Il parto prematuro artificiale in Italia, sue indicazioni e metodi operativi, Milano, 1890.
- Un metodo di spaccatura della cervice uterina per cura della dismenorrea e della sterilità, Bologna, 1893.
- Laparotomie, Milano, 1893.
- Il triennio 1889-92 nel R. Istituto ostetrico-ginecologico di Parma, Torino, 1893.
- Due casi di utero bicorni con ematometra unilaterale, Roma, 1894.
- Beitrag zur Diagnose und Therapie des Uteruskrebses, Berlin, 1894.
- Sviluppo storico dell' ostetricia e della ginecologia, Napoli, 1895.
- Stenosi del collo dell' utero in donna affetta da isterismo, Firenze, 1896.
- La Gonorrea in relazione colla ginecologia e colla ostetricia secondo i più recenti studi, Milano, 1896.
- La pratica ostetrica a domicilio, Bologna, 1896.
- Contributo allo studio della ossificazione dello scheletro embrionale e fetale coi raggi Röntgen, Roma, 1896.
- Della endometrite decidua da gonococco, Firenze, 1897.
- Manuale clinico di terapia e di operazioni ostetriche, Torino, 1897.
- Malattie delle mammelle e del bambino in rapporto coll' allattamento, Bologna, 1897.
- Rivoluzioni nel campo dell' ostetricia, Bologna, 1898.
- Innesto dell' uretere in vescica per via transperitoneale, Bologna, 1898.
- Sulla inclinazione del bacino nei varii atteggiamenti della donna sotto l' aspetto ostetrico ginecologico, Roma, 1898.
- Fistule urétéro-utérine guerie par l'implantation de l'urétére dans la vesie ou moyen du boutou du Dr. Boari, Marseille, 1898.
- Innesto transperitoneale dell' uretere nella vescica per cura di fistola uretero-uterina, Milano, 1899.
- Ostetricia e ginecologia. Loro fondamenti, legami, confini, insegnamento, Napoli, 1899.
- Transperitoneale Einpflanzung des Ureters in die Blase behufs Heilung der Ureter-gebärmutter-fistel, Berlin, 1899.
- Intorno alla assistenza del parto podalico, Bologna, 1899.
- I tumori interlegamentosi, Roma, 1899.
- Sulle indicazioni della operazione cesarea della sinfisiotomia, della craniotomia e del parto prematuro, Napoli, 1899.
- Importanza della patologia degli annessi fetali e specialmente delle anomalie del cordone, Bologna, 1900.
- Des injections intraveineuses de sérum artificiel dans des cas d'infections puerpérales, Turin, 1900.
- Diagnostic et traitement du cancer du corps de l'uterus, Paris, 1900.
- Sulla diagnosi e sulla terapia del cancro del corpo dell' utero, Napoli, 1900.
- Relazione possibili fra la mola vescicolare e la degenerazione, Napoli, 1901.
- L'eclampsia puerperale, Bologna, 1901. Cancro dell' utero, Bologna, 1901.
- Tumore della placenta, Roma, 1902. Ueber ein placentartumor, Berlin, 1903.
- Gastrotomia primitiva per gravidanza ectopica, Firenze, 1903.
- Commemorazione del Dott. Emanuel Bruers, Roma, 1904.

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BRITISH GYNÆCOLOGICAL SOCIETY.

NOVEMBER 10, 1904.

PROFESSOR JOHN W. TAYLOR, M.D., F.R.C.S., PRESIDENT,
IN THE CHAIR.

EXHIBITS.

DR. MACNAUGHTON-JONES read the pathological reports on two cases of embedded adnexal tumours, which had been completely hidden by perimetritic exudation, and later, exhibited with the epidiascope sections of the tube illustrative of desquamative salpingitis. He raised the question of the necessity of hysterectomy if the uterus were not materially affected.

Dr. R. H. HODGSON asked whether he correctly understood Dr. Macnaughton-Jones to attribute all the pain in salpingo-oöphoritis to peritonitis. Surely pain in an ovary or tube did not necessarily imply the presence of any peritonitis.

Dr. HEYWOOD SMITH said that in deciding as to the removal of the uterus in ovarian disease one had to consider the age of the patient and whether she was, or was not, married. In his experience, the removal of the ovaries alone

did not interfere with sexual appetite, which, when the uterus was also taken away, became very much deteriorated.

The PRESIDENT concurred with Dr. Macnaughton-Jones in the opinion that it was, as a rule, an advantage to retain a uterus that was comparatively healthy; at the same time, even in abdominal operations, he found himself more and more inclined to begin his work by curetting the uterus if he had any reason to think there was endometritis present.

Dr. MACNAUGHTON-JONES, in reply, said that he had expressed no opinion in regard to the pain; Dr. Cuthbert Lockyer's report did, however, refer to the considerable influence which contractions of the hypertrophied muscular tissue of the so-called uterine platysma had on the clinical aspect of such cases. He had been recently informed by a patient from whom he had removed both ovaries, and on a subsequent occasion the uterus also, that her sexual sensations had not been in the least affected.

Dr. BEDFORD FENWICK read notes on a case of

OVARIAN DISEASE ASSOCIATED WITH UTERINE FIBROIDS.

The specimen which I now show was taken from a patient, aged 44, and unmarried, who was sent to me by Dr. Richmond, of Wimbledon. Ten years ago, she was told by a well-known obstetric physician that she had a fibroid tumour, but it would disappear at the change of life. It almost seems too much to hope that this antediluvian superstition will ever be decently buried, because one is constantly meeting with it in the case of patients with uterine fibroids who have passed through years of needless suffering and danger whilst waiting for a menopausal millennium. For the past six months, the patient has suffered from increasing pain in the abdomen, especially on the right side, and from increasing loss of flesh and strength. I performed abdominal section on October 24, and had some difficulty in lifting up the mass as it was completely moulded into the shape of the pelvis. It was also exercising considerable pressure on, and causing some displacement of, the left side of the bladder. I performed

hysterectomy in the usual manner, and as both ovaries were grossly diseased, removed them with the tumour. I then observed that the left ureter was greatly dilated, being about three times its normal calibre, evidently due to the effect of compression on the base of the bladder by the tumour. I had predicted this condition before operation, and had the urine measured carefully for a week previously, the average amount being only 35 oz. a day. Directly after the tumour was removed, the bladder rapidly filled, proving that there must have been a considerable collection of urine in the ureter and calyx of the left kidney, and after the operation the average amount of urine per diem rose at once to 55 oz. I feel confident that sufficient stress is not laid upon the danger to the kidney caused by pressure on the ureter by fibroids of the uterus. Indeed, I regard this as one of the most serious and insidious complications to which these patients are liable. I desire to call special attention to the gross disease in both the ovaries attached to the tumour. The left ovary was converted into a blood cyst containing 8 oz. or 9 oz. of black blood. The right ovary contained about 4 oz. of congealed blood, about half its cavity being filled with a dense nodular growth, which has thinned the capsule at one part to a thickness of only one-tenth of an inch. The growth cut like scirrhus, and I am indebted to Dr. Aarons for the sections which are shown to-night, and which prove that the growth is a fibro-adenoma. In the next place I wish to call attention to the remarkable size of the ovarian arteries, which are four or five times their normal calibre. Dr. Aarons has kindly also made sections of these, and it will be observed that the middle coat of the artery is greatly hypertrophied. It will be within the memory of the Society that a distinguished Fellow, at a meeting some two years ago, showed a number of microscopic sections proving that the uterine arteries are greatly thickened in cases of fibroid disease of the uterus, and that he expressed his belief that this condition was the cause of the fibroid change. I then, and have since, ventured

to point out that there is reason to believe that the increased hypertrophy of the uterine arteries is the consequence and not the cause of the fibroid change, and precisely resembles the hypertrophy of the muscle of the heart or of other arteries in the body where the circulation is called upon to overcome an increased difficulty or obstruction to the blood stream. And this case, and others which I have shown, in which the similar hypertrophy of the ovarian arteries occurs, goes further to prove my argument. But there is a practical point to which I have also drawn attention, and which this case strongly supports : that whenever we have fibroid thickening to any marked degree at the *fundus* of the uterus—that is to say, where the ovarian arteries enter the uterine tissue—then, and then only, will there be much obstruction to the flow through the ovarian vessels ; then, and then only, do we find hypertrophy of the muscular coat of the ovarian artery ; and then, and I am inclined to believe then only, do we find ovarian disease associated with the presence of the uterine growth. I would venture to emphasise these facts, because they have assisted me much in practice in this way : that when I find the fundus fairly free from fibroid growths I always leave the ovaries with an easy conscience, but when there are fibroids on one or both sides of the fundus, and considerable enlargement of the ovarian artery, I have always found sufficient disease in one or both ovaries to make it evidently advisable that they should be removed.

The PRESIDENT said that he had occasionally, but only occasionally, found large blood-cysts of the ovary in association with myoma of the uterus ; in one instance the tumour was as large as an ordinary water bottle, and in another as large in diameter as an adult arm, and contained a quantity of black blood. In the cases he could call to mind the tubes had been quite free, and it did not seem that such cysts could be directly connected with menstruation, or explained by regurgitation of blood from the tubes. The pathogenesis of these cysts was obscure, and he would be glad to hear if Dr. Bedford Fenwick had formulated, or knew of, any theory on the subject.

Mr. CHRISTOPHER MARTIN said that, in his opinion, the most urgent of all indications for operative interference in fibroids was pelvic pressure, especially pressure upon the bladder and ureters. But pressure on the ureter in many cases added greatly to the risk of the operation, especially when the tumour was very adherent in the pelvis. In removing such a tumour not long ago (a fibroid embedded in the pelvis) he found he had removed one and a-half inches of the ureter lying in a groove at the side of the mass. He performed nephrectomy on the corresponding side, but the patient died from shock. With regard to Dr. Fenwick's theory of the causation of ovarian disease by pressure of a fibroid on the ovarian artery, that would not, he thought, justify the removal of an ovary apparently healthy ; it was reasonable to suppose that when the tumour and the pressure were removed, the circulation in the ovary would become normal again. Except for gross disease, it was better not to remove an ovary.

Dr. FENWICK, in reply to the President's question, said that he had looked up the text-books on this very point some two or three years ago, and had been unable to find any explanation given, and in several no mention was made of the ovarian changes in fibroid disease of the uterus. The theory he had ventured to advance at this Society was, of course, only a theory, and nothing more ; but it seemed to him to be not only plausible, but sufficient to explain the pathology. Increased power in the ovarian artery, combined with increased difficulty in the ovarian circulation at the uterine fundus, must inevitably mean a constant hypercongestion of the intervening tissues, that is to say, in the ovary itself ; and the effect of such congestion must be not only the production of inflammatory changes, but, in the case of such an organ as the ovary, a greater likelihood of cystic degeneration ; and, given the formation of a cyst, the greater probability of rupture of a vessel, or of exudation of serum into the cavity, of rapid increase in the cystic area ; or in other words, of the production of the very conditions

shown in the specimen he had just brought before the Society, and he would point out that even if there was no rupture of a blood-vessel, the vascular changes would still explain the production of other forms of degeneration which are known to be associated with ovarian disease.

Dr. HEYWOOD SMITH showed a uterus containing numerous fibroid tumours, one in process of sloughing; the right ovary was converted into a large blood-cyst, the left, though slightly enlarged, had not been removed, as the patient was young. An interesting point in the case was that the patient's temperature had been persistently sub-normal, and that, in spite of the sloughing tumour, there had been no symptom to suggest suppuration.

Dr. Heywood Smith also showed, for Dr. Alexander Duke, a device for the removal of wet wool from a Playfair's probe, often in some hands a difficult proceeding. It consists of a little metal frame with a slot wider at one end. The probe is passed through the wide end, and on being pushed towards the narrower part, the wool is then easily stripped off.

Dr. BEDFORD FENWICK pointed out that in Dr. Heywood Smith's specimen the ovarian artery was greatly hypertrophied, being at the point where it was divided nearly double the normal size.

The PRESIDENT said that the discussion on Dr. Macnaughton-Jones' specimen of hæmorrhagic endometritis (which was postponed at the last meeting) would now be taken, and he invited all who were present to take part in the discussion.

Dr. MACNAUGHTON-JONES said he had brought the specimen again, but had little to add to his remarks at the last meeting. Cases of glandular endometritis attended with persistently recurrent hæmorrhage might pass into what was practically a form of pernicious anæmia, in which the condition of the woman was almost as bad as if she were suffering from malignant disease, and if bleeding recurred there was no alternative save removal of the uterus.



Uterus and adnexa removed from patient, aged 49, twice previously curetted for interstitial and glandular changes in the endometrium.

The ovaries are bisected showing two cysts in the left filled with blood coagula, and a solitary cyst in the right.

Hæmorrhagic endometritis due to interstitial and glandular changes in the endometrium (see pages 270, 326).

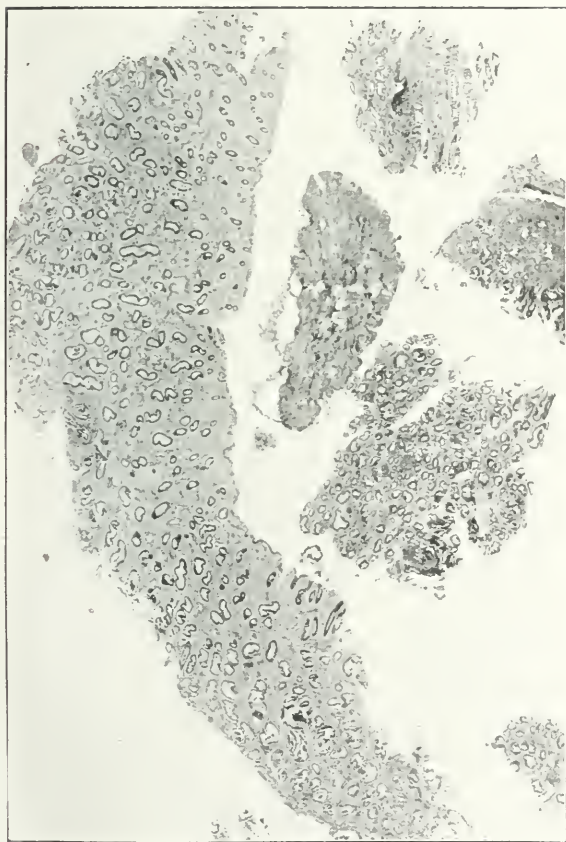
(See over page for cuttings.)

PLATE II.



Previous curettings of the uterus. (Plate I.).
The tubules were distended into small cysts—there was desquamation of the gland epithelium and infiltration of the stroma.

PLATE III.



Curettings in a case of glandular endometritis—The portio was removed in this instance for cystic degeneration—severe recurrent hæmorrhage.

PLATE IV.



Portions of curettings taken from a case of glandular endometritis; there was follicular degeneration of the cervix and recurrent hemorrhages.

Mr. CHARLES RYALL said that some years ago he had shown to the Society two specimens removed by hysterectomy, and his treatment met with a good deal of adverse criticism at the time, but in the condition described by Dr. Macnaughton-Jones, extensive hyperplasia of the endometrium with increase of the muscular and fibrous tissue, and general thickening of the uterine wall and some endarteritis, the curette, though repeatedly resorted to, seldom gave relief, indeed, generally made things worse; and for obstinately recurring hæmorrhage in such cases, removal of the uterus was the best treatment.

Dr. J. J. MACAN reminded the Fellows that the term "hæmorrhagic endometritis" was originally applied by Slaviansky some fifteen years ago to cases of profuse uterine hæmorrhage associated with inflammation, affecting chiefly the glandular elements of the endometrium, during an epidemic of cholera. The term, as Veit mentions, had been also applied to uterine hæmorrhages occurring during the course of the exanthemata. A report of one such case would be found in the November number of the Society's Journal (*Summary, p. 81.*)

Dr. MACNAUGHTON-JONES, in reply, said that he could understand the term hæmorrhagic endometritis being used in connection with the exanthemata, for during eleven years' work in a large fever hospital he had seen many cases of hæmorrhage from the uterus, more especially in typhus of a malignant type, but he attributed that hæmorrhage to a change in the blood rather than to any affection of the uterus. The condition he had brought under the notice of the Society was generally the result of long pathological change, and the question was, not so much the cause of the hæmorrhage, as the passing of some of these cases of glandular hypertrophy and desquamation into a state approaching malign adenoma.

DISCUSSION ON MR. CHRISTOPHER MARTIN'S PAPER ON
THE TREATMENT OF INTRACTABLE PROLAPSE BY
EXTIRPATION OF THE UTERUS AND VAGINA. (*Vide
ante*, p. 272.)

Dr. J. A. MANSELL MOULLIN said Mr. Martin had brought before the Society a new operation for the treatment of this distressing condition. Mr. Martin recognised the futility, or at any rate, the temporary nature of the benefit to be derived from the many operations hitherto devised for the correction of prolapse. The operation now proposed did not rest on the cutting away and suturing of tegumentary structures, but on a more solid and scientific basis, namely the union and reconstruction of the fascia to form a pelvic floor resembling that of the male pelvis. It was well known that to repair a hernia occurring in the cicatrix of an abdominal incision it was essential to expose and unite the cut edge of the transversalis fascia. If this was done effectually, a good result was certain, otherwise the operation was in vain. Mr. Martin tells us that the pelvic fascia, which splits to enclose the upper portion of the vagina, does not itself become prolapsed, but that the uterus and vagina are prolapsed and stretched away from it. When these latter are removed, the cut margin of the fascia can be readily distinguished and united with sutures to the opposite side, thus obliterating the opening through which the vagina passes, and forming a continuous pelvic floor. Mr. Martin does not conceal the fact that the operation is a formidable one, and attended by many risks. An improved *technique* may possibly enable us to add it to our remedies for use in severe cases.

Dr. R. H. HODGSON, after complimenting Mr. Martin on the frank way in which he had given the details of his cases, said that it was noticeable that the fever and suppuration which in three cases did not occur till after ten days, in the fourth appeared on the second day after the operation. It seemed, therefore, probable that this fourth case was one

of infection at the time of operation; the others, due to some change in blood-clots formed in the wound. The great tendency of blood-clots in the pelvis to undergo decomposition might, he suggested, be due to their proximity to the rectum, and to the difference between the coverings of the intestine outside and within the abdominal cavity. He had himself suggested some years ago that prolapse might be remedied, or prevented, by amputating the uterus at the internal os, drawing down the free edges of the broad ligaments through the cervix, and so making all the parts taut. This would save the vagina, which it was desirable to do, even in a woman getting on in years. He suggested that the suppuration might be avoided by preventing the collection of blood, a consequence of the failure to obtain accurate apposition of the raw surfaces. He thought that the introduction into the rectum of one of Cooper's tubes, for arresting hæmorrhage, might have the desired effect.

Dr. BEDFORD FENWICK said that he considered the Society owed a debt of gratitude to Mr. Martin for the excellent paper he had brought before them, and personally he much admired the skill and courage displayed in the operation Mr. Martin had described, because, to anyone who was constantly accustomed to operate on the abdomen or vagina, it needed no words to explain the difficulties of the operation in question. There were one or two matters which had particularly struck him in Mr. Martin's description. In the first place, he could not understand the special advantage of removing the mucous membrane from the anterior wall of the vagina, but as Mr. Martin did it, it seemed to him to explain all the suppuration to which Mr. Martin referred; for example, he apparently left an entirely raw surface in the canal, which must be closed by granulation, which involved the formation of pus. If the lower part of the canal closed first, as it most probably would do, then the pus must collect at the top of the canal, and of course the septic conditions to which Mr. Martin referred

naturally followed. Mr. Martin, indeed, seemed to have realised this, because he in each case passed a pair of forceps along the canal, liberated the accumulated pus, and the patient at once recovered. If he (Dr. Fenwick) were going to perform this operation, he would certainly feel inclined to modify it, therefore, to the extent of leaving the mucous membrane on the anterior wall untouched, and thus saving what everyone would know to be the most difficult part of the operation. Then by stitching its edges together one could reduce the canal to the diameter of an ordinary pencil, and in the great majority of severe cases he could not but think that colporrhaphy to this extent would be sufficient to entirely cure the patient. Moreover, it would leave no suppurating surface, it would not interfere with the relations of the uterus and ovaries, but it would to all intents and purposes close the canal into and through which prolapse of the rectum or bladder could occur. Then, again, in Mr. Martin's operation he could not but think that there must be a great practical difficulty sometimes in finding the pelvic fascia, and when it had been found in drawing it together sufficiently to close the base of the pelvis, which, as he understood the procedure, was the scientific principle on which Mr. Martin's operation was founded, and which, as a principle, both anatomical and pathological, he cordially accepted. Nature had created a wide separation between the fascia, and in his experience it was in some cases not easily found. He, therefore, was inclined to believe that cases might occur in which the edge of the fascia could not be defined, and others in which it would not be possible, by any permissible traction, to draw the edges of the fascia into a sufficiently accurate position to obtain firm union.

Dr. MACNAUGHTON-JONES commented on the fact that only on the rarest occasions was such an operation called for, as acknowledged by Mr. Martin himself. He (Dr. Macnaughton-Jones) had on three occasions removed the uterus and then performed free colporrhaphy. In these

cases the bladder and bowel were down in the procident sac. They were all permanently relieved. It was rarely indeed that even this step was necessary. A Schroeder's operation, consisting of a free anterior and posterior colporrhaphy and high amputation of the cervix, with a deep perineorrhaphy, was sufficient in the majority of instances, combined, if need be, with a ventrofixation, or better still, an Alexander-Adams operation. So far back as 1889, Professor A. Martin (now of Greifswald) had performed complete extirpation of the vagina and uterus for both cancer and procidentia. The operation differed in the two instances. In 2,000 cases of procidentia, up to the end of 1903, Professor Martin had performed total extirpation nineteen times. He removed the adnexa also. In all such operations a good deal of bleeding might be avoided by early ligature of the uterine trunks or the vaginal branches. The rarity of the operation did not detract from the boldness or ingenuity of the procedure.

Dr. JERVOIS AARONS said that he was much struck with the ingenuity of Mr. Martin's operation. He had, since the paper was read, seen a case of prolapse which recurred after hysteropexy, perineorrhaphy and anterior and posterior colporrhaphy, and for such a case, especially in a woman past the menopause, the method promised relief otherwise unattainable.

The PRESIDENT said: I have watched with very great interest the work of my colleague, Mr. Christopher Martin, on the extirpation of the uterus and vagina for the treatment of severe prolapse, and can, from my own observation, confirm a good deal of what he has told us. But while I can and do most heartily admire the use of thought and skill which are united in the performance of this long and difficult operation (for there is one part at least in its performance when, if I remember rightly, as the uterus is turned downwards and backwards, all ordinary relations are more or less reversed, and every attention and care is necessary to understand as well as to perform the work),

I am not fully satisfied after all is completed that the best has been done for the patient. The loss of the vagina is a serious loss, and what Mr. Martin regards, and rightly regards, as the essential part of the operation—the rebuilding up of the stretched pelvic fascia—can be obtained in another way, I think, without the loss of the whole vagina. If, after starting to repair a perineum by Mr. Tait's method of flap-splitting, the upper flap of the posterior vaginal wall be grasped by the left thumb and forefinger and the scissors dissection be carried up higher and higher between the rectum and vagina, a plane is finally reached where there is only the flimsiest union between the vagina and rectum, and the finger can bluntly separate the two right up to the cervix if necessary. Now, if this be done, the separation being not only carried high enough but extended (by dissection) freely on both sides, and the long triangular flap of vaginal membrane thus produced be fully excised, you find a condition exactly similar to that produced by Mr. Martin in its free exposure of the pelvic or recto-vesical fascia. Some of this has been already removed by the removal of the vaginal floor above it, and you can see the edge of the fascia as a distinct structure on each side, a divided membrane, which can be still further excised or united at once, at the discretion of the operator. It is the repair and firm suture of this, confining the rectum backwards, that is the essential in the cure of every rectocele, but I question whether it is of much use in the prevention of a cystocele. The accompanying cystocele in cases of bad protrusion needs separate treatment. The usual operation I have done for some years in cases of severe prolapse, is, first, a repair of the cystocele by anterior colporrhaphy, with a buried tier-suture of the base of the bladder, so as permanently to contract its capacity and cure all anterior bulging. The suture is a continuous one of the finest silk, carried from urethral orifice to cervix, back again from cervix to urethra, and still back again from urethral orifice to cervix, enfolding more and more of the

dilated and redundant bladder, until the base of the bladder and anterior wall of the vagina are perfectly taut and firm. Here the fascia is sometimes recognisable, more often it is not; but the remains of it are taken up with the floor of the bladder in the silk suture. This suture is buried. A separate running silk suture unites the vaginal wound over this. The uterus is then fully replaced, and the posterior dissection between the rectum and bladder carried out as I have described. As much of the posterior and lateral vaginal wall as is considered advisable is then removed through nearly the whole length of the vagina. Deep sutures of silkworm gut are passed to bring the raw surfaces into close apposition, and a separate fine silk buried suture is often used for the fascia only. It may help to explain my description if I show the parts removed in a recent case, occurring about two weeks ago, after the meeting is concluded. The operation is, of course, a minor one, and the wounds heal readily without any suppuration or temperature. By this means the vagina is contracted through its whole length; the recto-vesical fascia is repaired, the bladder is kept up, but the vagina is retained, and no definite function or organ is necessarily lost. I cannot say whether all of the cases operated on in this way will stand the test of time, but so far I have not met with any real failure. In one respect, even as regards the protrusion, I am inclined to think that the method I have described may compare very favourably with that of total extirpation of the vagina. Some cystocele-bulging or impulse was present in the cicatrix of one of the cases Mr. Martin kindly showed me, and this, I think, may be avoided by the cure of the cystocele before repairing the fascia posteriorly. I should like to suggest that even in extirpation of the vagina it might be advisable (if time permitted) to enfold and narrow the base of the bladder by a buried suture before bringing the rest of the wound together.

I think that the Society is to be congratulated in having such an original and bold innovation in surgery, and such

a valuable and interesting paper brought before it by one of our Fellows. As your President as well as his colleague, in thanking him for his communication, I would like especially to notice the fine and virile restraint which has marked his practice. The treatment is, as he has acknowledged, a severe and even dangerous one. He has used it with rare judgment and discretion.

Mr. CHRISTOPHER MARTIN, in reply, said: First let me thank the President and members of the Society for the kind manner in which they have received and discussed my paper. In reply to Dr. Mansell Moullin, I have never found any difficulty in recognising the pelvic fascia and in sewing its edges together. It is a very distinct and definite layer. In reply to Dr. Hodgson, who asked why the bloody effusion broke down into pus, I would point out it was exposed to two sources of infection—bacteria from the rectum and bacteria from the ulcerated cervix and vagina. Dr. Fenwick asks "Why not leave the anterior wall of the vagina and be content with removing the posterior vaginal wall and sewing up the fascia?" I would point out that this would not cure the cystocele. Ergot and strychnine given with the idea of reducing the size of the uterus would, I am sure, be perfectly useless in bad cases of total prolapse. Moreover, most of these women are past the menopause. I am interested to learn from Dr. Macnaughton-Jones that Professor Martin, of Berlin, has devised and carried out a somewhat similar proceeding. I appreciate the value of the suggestion of Dr. Macnaughton-Jones that the uterine arteries should be ligatured before the vaginal mucous membrane is dissected off. It would no doubt tend to diminish the arterial bleeding. The most troublesome bleeding, however, comes from the veins of the vaginal plexus, and I do not think that it would prevent this. I am very grateful to the President for his generous remarks. I am pleased to know that he agrees with me in insisting on the importance of suturing the pelvic fascia in operating for uterine prolapse. In all these cases of plastic operations

for prolapse, it will be found that the more thoroughly the vaginal mucous membrane is removed, and the more completely the pelvic fascia is brought together, the better will be the ultimate result.

Dr. MACNAUGHTON-JONES read notes of the condition Tuberosæ Subchorial Decidual Hæmatoma, and touched on the etiology of the condition as advanced by Breus, Goldspohn, Newman, Davidsohn, and H. Schroeder. He showed with the epidiascope a specimen of Professor H. Schroeder's of this condition, which he (Dr. Macnaughton-Jones) had recently brought from Professor Fritsch's klinik at Bonn.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, DECEMBER 8, 1904.

PROFESSOR JOHN W. TAYLOR, M.D., F.R.C.S., PRESIDENT, IN
THE CHAIR.

SPECIMENS.

CARCINOMA OF THE FALLOPIAN TUBE.

Dr. MACNAUGHTON-JONES said that he exhibited this specimen solely for its pathological interest. For some years he had lost sight of the case from which the tumour was removed, and it was only recently that he had discovered the latter among others in his collection. When he had sent it for examination and report to Dr. Cuthbert Lockyer, it proved to be one of exceptional interest. The report was as follows : " The tumour is oval in shape, and measures 10 inches in its greatest and 8 inches in its shortest circumference. It has a lobulated surface ; some of the lobes are smooth, the growth being enclosed in a highly-stretched fibrous-looking shiny capsule. Other lobes are rough and papiliform, consisting of growth which has burst through the containing capsule. The smooth thin capsule has been peeled off, the greater part of one portion of the growth revealing a rough surface studded with nodules the size of a pin's head. A further portion of the tumour has been cut through its greatest diameter, the cut surface has a pale yellow colour, and consists of soft friable granular-looking material. At one point there was a small projection which admitted a fine bristle. This on transverse section proved to be the cut end of the Fallopian tube. On following this up it was found to lead through the capsule into the cavity

containing the new growth. Sections have been prepared at various levels to show that the capsule of the growth is continuous with the wall of the undilated tube. These sections prove that the smooth capsule enclosing the tumour consists of fibro-muscular tissue continuous with that forming the wall of the unexpanded tube. The tumour is, in fact, of tubal origin." Section 1 shows a thickened tube-wall with intact lumen and with swollen, but perfect, plicæ. The vessels are thickened and contain thrombi. The main lymphatics are injected by leucocytes, but contain no deposit of new growth. Section 2, taken a little further on, shows a portion of tube wall with carcinomatous growth arising from and distorting the still existent plicæ. Section 3 shows a few plicæ, but the majority have disappeared, giving place to columns of cancer cells densely packed together, and which have lost their columnar shape and have become more or less spheroidal. These lie in close apposition to the stretched wall of the tube; the latter is here invaded by cancer cells which occupy alveolar spaces (lymphatics) between the fibro-muscular layers. Section 4, taken furthest from the non-dilated end of the tube, shows a much thinned-out tubal wall, forming the capsule to a dense solid carcinomatous growth composed of densely packed spheroidal cells arranged in long columns and concrete masses.

Dr. Macnaughton-Jones remarked that unfortunately the clinical history of the case had been lost sight of, and he could not say what the ultimate issue was. In Mr. Alban Doran's recent paper in the *Journal of Obstetrics and Gynaecology*, October, 1904, there was a table of over 50 complete cases of primary cancer of the Fallopian tubes. Up to 1902 Graef of Halle had found 52 recorded cases. From Mr. Alban Doran's table it would appear that married life had not much influence on the disease, 34 cases occurring in married, and 29 in unmarried women. Twenty-seven had been pregnant, and 9 were sterile. As to the involvement of other organs, the uterus was involved in only 6 cases,

and in 1 there did not appear to be any relation between the cancer of the tube and that of the uterus, inasmuch as the cervix only was diseased. In only 10 cases was the ovary involved; in 18 cases no other parts were involved. As regards the nature of the cancer, 40 were papillomatous, 4 medullary, 1 adeno-carcinomatous, 1 alveolar, 1 a villous endothelioma, 1 a sarcoma, 1 a carcinoma of a nature not stated, and in 3 the type of malignancy was not described. Of all the cases only 1 survived over three years, and 1 two years and two months. It will be seen from Dr. Lockyer's report that the nature of the solid tumour in the present instance was spheroidal-celled carcinoma. Dr. Alban Doran's paper, with the interesting clinical facts which he records, is worth perusal.

Mr. BOWREMANN JESSETT said that he had never met with a case of primary columnar-celled carcinoma of the Fallopian tube, and suggested that the specimen might possibly be a secondary growth of carcinoma of the bowel.

Dr. F. A. PURCELL also spoke of the extreme rarity of primary carcinoma of the tube, and suggested that there might have been primary growth in the uterus.

Dr. C. F. H. ROUTH asked what was the age of the patient?

Dr. MACNAUGHTON-JONES, in reply, said that the capsule of the tumour was a direct extension of the Fallopian tube; the analysis of Mr. Doran's cases showed that the uterus was involved in only 6 out of 53 instances.

The PRESIDENT (Professor J. W. Taylor) then showed the following specimens, reading the notes appended:—

(1) FALLOPIAN TUBES, LIGATURED TWICE AT PREVIOUS OPERATIONS, AND REMOVED IN THE CASE OF A THIRD CÆSAREAN SECTION.

M. S., a strumous dwarf, aged 25, with both curvature of spine and contracted pelvis, was married in July, 1900. She immediately became pregnant, and was sent to me for

operation by Dr. Darroll, of Leintwardine, in February, 1901.

Labour commenced on the morning of March 29, when I operated by Cæsarean section, removing a healthy female child, which is still living. After suturing the uterine wound, I tied each Fallopian tube by a single ligature of silk as some bar to further pregnancy. The mother and child both did well, and left the hospital on April 17, but remained at our Convalescent Home for some time longer. The following year, 1902, the patient developed tuberculous disease of the right knee-joint, and her leg was amputated above the knee at Shrewsbury Infirmary, on September 22, 1902. In 1903 she again became pregnant, and was sent up to me once more by Dr. Darroll towards the end of August. I did a second Cæsarean section on September 14, 1903, removing again a living female child, which, however, was very feeble, and only lived about half an hour. After the suturing of the uterine incision was completed, I carefully examined the Fallopian tubes, and found considerable atrophy at each site of ligature. The atrophy was most marked on the right side, where the tube seemed narrowed to a point. The silk had been absorbed. I placed two fresh ligatures of silk on each Fallopian tube (four ligatures in all, but without any cutting or removal), and closed the abdominal wound. The patient did well after the operation so far as the section was concerned, but during the whole of the time of her stay in hospital she was troubled with chronic strumous conjunctivitis and ulceration of the cornea, an affection from which she had been suffering for nearly two years, in spite of the free administration of cod-liver oil. She went to the Convalescent Home on October 8, 1903.

Early in this year I heard from Dr. Darroll that from the date of her return home she had never menstruated, and was evidently again pregnant. She came up in July last, and I found that this was indeed the case. On this occasion I determined to remove the uterine appendages,

but was anxious not to hurry the performance of the operation so as to obtain a living child, if possible.

On August 4 I went for a holiday, and two days later, the patient beginning to be in labour, my colleague, Mr. Christopher Martin, kindly operated for me, removing a living child, which, like the preceding one, only lived about three quarters of an hour.

Mr. Martin, before closing the abdomen, removed the whole of each tube, and a small portion of each corresponding cornu of the uterus. He also removed one ovary. The patient made a good recovery, and left the hospital soon after my return on September 7.

On looking at the tubes removed, it may be seen that one tube is as completely divided by the double ligature as if a piece had been cut out of it, while in the other the whole of the muscular coat appears to be gone, but (in all probability) the mucous channel is still pervious.

In addition to the direct interest of these specimens as contributing to the general sum of knowledge regarding Cæsarean section, and the utility or non-utility of ligature of the tubes as a bar to future pregnancy, I must confess that they have a very considerable interest to me as bearing on the question of the causation of tubal pregnancy.

It would, I suppose, be difficult to find two Fallopian tubes in which an ovum would be theoretically more likely to be stopped on its journey to the uterus, yet the pregnancy on each occasion after ligature was uterine and not tubal.

It seems to suggest that the cilia of the epithelial coat, even within the lumen of the tube, have more to do with the progress of the ovum than any peristaltic muscular contraction.

(2) A LARGE ABSCESS OF THE OVARY.

This specimen is, I believe, a rather rare one, it being unusual to find so large an abdominal tumour due to ovarian abscess. The history is interesting: The patient, Mrs. C. C., had been married five years, but had never been pregnant,

when in August of this year she developed a rising temperature with obscure abdominal pains and, rather naturally, was supposed to be suffering from typhoid fever.

She was seen on August 21 by another consultant, who diagnosed suppuration, and opened an abscess by the vagina on the 23rd, over a pint of pus and blood being evacuated.

This undoubtedly gave her very great relief, and she was able to get up and go out of doors a little later; but since this date an increasing enlargement was noticed in the lower part of the abdomen—the catamenia had ceased from the date of her illness.

When she was sent to me by Dr. Kingsland, about the middle of November, I found a remarkably prominent cystic swelling reaching to the umbilicus, and looking like a five months' pregnancy, or a very distended bladder.

On examination, however, I found it was due to neither of these conditions, but to a tumour of the left ovary or left broad ligament pushing the uterus to the right. The lower pole of the cyst came down to the level of the vaginal cervix on the left side, the side of the uterus being apparently fixed to the wall of the cyst, and a diagnosis was made of adherent ovarian tumour or broad ligament cyst. The patient's temperature was never quite normal, but usually slightly raised; on the evening of admission into hospital it was 101° F. Under anæsthesia, on November 19, I came to the conclusion that the tumour must be intraperitoneal, and operated by abdominal section, removing a large single abscess of the left ovary, with dense adhesions to the pouch of Douglas at the site of the first tapping, or incision. As there was necessarily some fouling of the pelvis in the separation of these adhesions, I finished the operation by posterior vaginal cœliotomy and gauze drainage. The pus removed was examined by my assistant, Dr. Smallwood Savage, and showed a pure growth of bacillus coli, but at no time during the operation was there any visible adhesion or channel of communication found between the ovary and the rectum. The patient made a

good recovery, and went to the Convalescent Home two days ago.

The PRESIDENT also exhibited a series of three cases of

CANCER OF THE BODY OF THE UTERUS,

all removed within the preceding four or five weeks :—

The first was a simple case of cancer of the body, occurring in a married woman, aged 56, four years after the menopause, and attended by the classical symptoms of watery, foul-smelling and bloody discharges, for three months before operation. The uterus was removed by vaginal hysterectomy on October 31, and on being laid open, disclosed a fairly typical and very pretty specimen of the disease. The patient made a good recovery.

The second case appeared, clinically, to be one of ovarian tumour, complicated by a small uterine polypus or fibroid. The patient was single, aged 43, never regular, the last normal period having taken place some three years previously; since then she stated that she had suffered from a daily coloured discharge, never profuse, and never amounting to more than a "show." On examination, she was found to have a large abdominal tumour reaching well above the umbilicus. The uterus was pushed backwards by the tumour; the cervix was open, and a small growth, like a polypus, which did not break down or bleed on examination, was just to be felt by the tip of the examining finger. I operated on November 17, and on first attending to the condition of the uterus under anæsthesia found that the growth presenting at the cervix was soft, brain-like, and almost certainly malignant. I therefore proceeded to remove the whole of the uterus as well as the ovarian tumour and the uterine appendages of the opposite side, hoping in this way to obtain freedom—or a longer freedom—from recurrence. The patient has done well, and is now convalescent. The uterine growth has been examined by Professor Leith, who reports upon it as malignant. The

ovarian tumour is still under examination, but presents the rough general characters of malignancy.¹

The third case was originally one of myoma of the uterus, attended for several years by menorrhagia. The patient, a midwifery nurse, single, aged 52, appeared to pass through the menopause eighteen months ago, and the hæmorrhage ceased. For six months an irregular foul-smelling discharge returned, and in September and October last she suffered from severe hæmorrhage, with "floodings." The patient was virginal, and the vaginal cervix was free from any tangible ulceration. The tumour filled the pelvis, and therefore no estimate could be made of fixation. The abdominal characters of the tumour were those of a fibroid. The diagnosis was made of cancer of the uterus or a "sloughing" fibroid, and I operated on December 1, doing a panhysterectomy by the combined method. There was pyometra and right pyosalpinx, and the extraction of the tumour was by no means an easy one. During its removal the uterus tore at the junction of the body with the cervix, and the latter, which was removed separately, was unfortunately not preserved. The pathological examination appears to show that a malignant adenoma is invading a myomatous uterus, but the case is too recent to obtain a full report. The patient (to-day) is doing well.

Dr. HEYWOOD SMITH said that as the ligature allowed a certain amount of patency in the lumen of the tube, more radical measures were required to ensure sterility.

Dr. J. A. MANSELL MOULLIN concurred as to the inadequacy of ligature; the easiest and best course to adopt is to remove the whole of the tube at the primary operation.

Dr. J. H. DAUBER remarked that cases had been recorded in which both ovaries had been removed, and yet the patient had become pregnant.

Dr. J. FURNEAUX-JORDAN said that Cæsarean section was

¹ This has since been reported upon as being decidedly malignant.

now attended with such good results that he did not see the necessity of sterilising a young woman merely because she could not have a child born through the pelvis.

Dr. MACNAUGHTON-JONES remarked that in some of these cases the method introduced by Pincus had been successfully employed to seal up the uterine canal by atmocausis. In regard to his specimen of carcinoma of the fundus, it was precisely similar to a case brought forward by him before the Society, and from the appearance of the uterus it did not seem that the cervix uteri was involved. In his case it was proved microscopically not to be so. It would be well that the specimen were examined to settle this point.

The PRESIDENT, in reply, said that though they now knew that ligaturing the Fallopian tube was a very poor bar to future conception, his critics must remember that in 1900, which was the date of his case, their knowledge was by no means so complete. However tightly a ligature was tied, the serous membrane and muscular tissue appeared to offer such resistance that in spite of the ligature, a minute aperture was left through which the ovum could pass. The surest method of ensuring sterility was, he thought, that adopted by his colleague, Mr. Martin, viz., to remove not merely the tube, but also the corresponding cornu of the uterus by a wedge-shaped or triangular incision, and to bring the edges of the wound together, so as to close the channel effectually by some depth of muscular tissue. For closing the wound in the uterus, he always used sterilised silk, and had not employed gut for that purpose for many years. The large ovarian tumour removed with the uterus diagnosed to be cancerous after curettage, had all the microscopic characters of a carcinomatous tumour, and if proved to be one, must have existed for several months before anything was known to be wrong with the uterus.



Photograph of interior of uterus in Case 1.

PAPER.

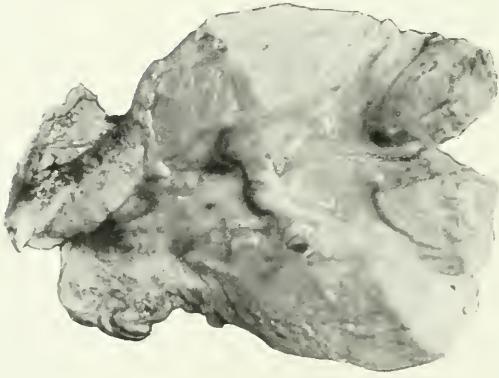
Dr. WILLIAM ALEXANDER then read the following paper:—

ADENOMA HÆMORRHAGICA OF THE ENDOMETRIUM.

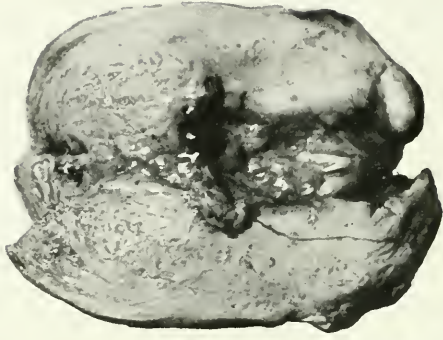
It is very strange how frequently students of medicine have to search in vain for assistance from books in regard to conditions that they meet with in their practice, conditions that they have seen with comparative frequency, and that have apparently been overlooked by other observers, or if seen have not been considered of sufficient interest to secure a record. Some conditions seem to be recorded too frequently, others are perhaps mentioned by some old writer, but not a modern pen is raised to rescue them from obscurity. Such are the cases I bring before you to-night in the hope that I may obtain more information than I have been able to derive from books:—

CASE 1.—In 1899, a lady, aged 34, consulted me for metrorrhagia of eighteen years' duration. During one of these years she had no bleeding, not even at menstruation. This year of freedom was early in the disease. Like the lady in Scripture, she had consulted many physicians without lasting benefit. She had been curetted by an eminent gynæcologist, now dead, but the relief was only for two months, when the metrorrhagia appeared as before. She was frequently bed-ridden, and at all times a useless invalid, although she had strong aspirations after a useful and busy life. Oöphorectomy had been recommended quite recently. This she felt inclined to have performed, but her medical attendant on hearing of the proposal warned her against it, telling her that removal of the ovaries was frequently followed by insanity. Such a possible, or rather probable result naturally frightened her, and she reluctantly refused that operation, resumed her couch, her bed, and her ergot, without much hope of ever being cured, and with the prospect of spending her life, up to the menopause at any rate, as

an invalid under medical supervision. She knew all about it, having had a large experience of medical men and medical subjects. Finding that after a more prolonged trial such a life was intolerable, she, without consulting either her doctor or her relatives, came to the out-patient gynæcological clinique at the Royal Southern Hospital. The patient was fairly nourished, but pallid and flabby, the result of repeated hæmorrhages and of her sedentary life. A walk, or even slight movements about her room would, she said, bring on the bleeding, and sometimes she had to remain in bed altogether for days. The uterus was slightly enlarged and congested, but there was no sign of malignant disease, and the patient's age did not favour such a serious diagnosis. There were no palpable fibroids, although the existence of small fibroids was the diagnosis arrived at. The previous history of the disease and its treatment did not permit the hope that further curetting would be more permanently successful than before, and her wish was to have the bleeding stopped, at any cost but that of her sanity and her life. She had no intention of marrying, but wished to live an active, useful life, and did not mind the loss of any of the child-bearing organs. She was advised to have a vaginal hysterectomy performed. This operation, she was told, was certain to stop the metrorrhagia and the ovaries being left behind, was not likely to produce such serious symptoms as were alleged to follow oöphorectomy. After consulting with her friends, she came into the private ward of the Royal Southern Hospital; hysterectomy was successfully performed on July 6, 1899, and the patient left the hospital well on August 8, 1899. On opening up the uterus after its removal, we found the mucous membrane replaced by a soft, white, gelatinous-looking substance about one-sixth of an inch thick, spreading up into the Fallopian tubes on each side, where it was specially luxuriant and almost polypoid, becoming scanty below and not so even on the surface. It looked as if the growth was reforming below after having been torn away there by the curette.



Photograph of interior of uterus in Case 2.



Photograph of interior of uterus in Case 3.

The uterine walls seemed normal, and there was no induration.

CASE 2.—In 1900, a Miss G., aged 39, was seen by me with Dr. George Johnston, of Liverpool, on account of persistent and profuse metrorrhagia extending over eight years. She was very anæmic, but did not seem to have lost much flesh. She had been curretted about five years ago, but not only without lasting benefit, but she said the hæmorrhage had been worse since the curetting. I performed the curetting myself most carefully and thoroughly. Her family history was distinctly phthisical, and the dread of the onset of phthisis that possessed the minds of her relatives and of her medical attendant was naturally intensified by the hæmorrhage, especially as she had been losing weight. I described my experience with the former case, and the same treatment was readily agreed to both by the patient and her friends, and by Dr. Johnston. On April 5, 1900, vaginal hysterectomy was performed. The uterus presented exactly the same appearance as in the previous case. The results of the operation were all that could be desired, the anæmia was gradually recovered from, and no signs of phthisis have so far appeared.

CASE 3.—Miss C., aged 38, single, had been quite regular and normal as regards menstruation up to five years ago, when she became the subject of frequent uterine hæmorrhages at all times, and sometimes to a great extent. The hæmorrhage was checked at first by ergot. When this failed curetting was performed, and the hæmorrhage abated for a few months. It then came on again more vigorously than ever, and in the meantime one sister had died from recurrent cancer of the breast, and the second had been recently operated upon for the same disease. The patient was also the subject of a nervous twitching of the muscles of the head and neck, which was made much worse by the hæmorrhage. Marriage and child-bearing were not likely events. She was in the meantime much reduced by the repeated losses of blood. From every point of view it seemed to be desirable to have

the uterus removed. This was done on September 18, 1900. The ovaries were left behind. The patient is now (1904) in excellent health. The uterus presented the same appearance as the other cases.

CASE 4.—Mrs. H., aged 36, married, one child sixteen years ago, from the birth of which she recovered satisfactorily. Ten years ago she had an ovarian tumour removed, and soon afterwards began to suffer from leucorrhœa and occasional metrorrhagia. Neither of these symptoms ever became severe, but they persisted in spite of treatment of different kinds. Twelve months ago she began to suffer pain in the right side of the pelvis, which continued ever since uninfluenced by any drugs, except sedatives. Six months ago dyspareunia set in, and was accompanied by blood-stained, foul-smelling discharge. Patient is cachectic-looking. On examination, the os uteri was found elongated, eroded, and very hard, but not apparently the seat of malignant disease. The canal of the uterus was normal in depth. Microscopical examinations of curettings did not give a decided diagnosis of any kind. Clinically the disease looked so malignant in its nature that removal of the uterus was advised, and was readily agreed to both by the patient and her husband. The operation was performed on November 3, 1904. On cutting the uterus open, the pathologist remarked, "The whole endometrium was infiltrated with a white, fibrous-looking formation that merely thickened the walls of the uterus without altering their contour." It was an exact counterpart of the conditions found in the other cases. On November 29 the patient was discharged, quite well.

CASE 5.—Emily E., aged 41, admitted to hospital November 13, 1903. She was confined eighteen months ago. Soon after convalescence from the confinement she began to suffer from pain in the lower part of the abdomen and back, and from intermittent attacks of bleeding, which were not amenable to treatment. Two days before admission she had severe hæmorrhage, and was bleeding profusely

when admitted to hospital. Ergot was given, and the hæmorrhage stopped. Examination showed an enlarged, eroded anterior os, uterine cavity normal in size. A curette passed in did not show any growth or irregularity of the uterine wall. As the state of the os was considered suspicious, a small piece of the anterior lip was removed for examination, and a section showed dense fibrous tissue with cystic dilatation of the cervical glands. No evidence of malignancy. She was douched with creolin. Ergot and hydrastis were prescribed. The hæmorrhage continued, and was frequently accompanied by so much pain that nepenthe had to be resorted to. On December 16, 1903, the os was dilated up to 22, and the cavity thoroughly curetted. The pathologist did not make anything definite out of the curettings, except that the glandular tissue was increased. For a few days she was relieved, when the hæmorrhage began again, and continued at frequent intervals. On January 21 she had a severe attack of metrorrhagia, accompanied by severe pain in the pelvis. She was evidently losing ground so rapidly that, being convinced that the disease was probably malignant, I advised vaginal hysterectomy, which was performed on January 25, 1904. The patient made a good recovery, but some troublesome pains in her back continued more or less till May, when she reported herself as quite well. She has not been seen since. The uterine cavity presented an exactly similar appearance to the previous two cases, where a fine, soft, gelatinous substance was spread over the surface of the uterine cavity.

It will be seen that the chief symptom in all these cases was persistent hæmorrhage recurring after curetting and after all treatment; not so great as to destroy life, but sufficient to keep up a condition of anæmia and invalidism. The size or shape of the uterus did not differ materially from that of a normal uterus, and the curettings did not present to the pathologist anything abnormal. The glands were, perhaps, more numerous, but nothing more. One had a child sixteen years ago, and another had a child one year and a-half

ago ; the rest were all nulliparous women. After removal, the uterine cavity presented very distinct and uniform features in a thick, semi-gelatinous, semi-fibrous membrane, running into folds or polypoid masses affecting the whole mucous membrane of the uterus and the beginnings of the Fallopian tubes. Little points of blood appeared here and there in some of the specimens. I am sorry not to be able to show a recent specimen, as hardened specimens become quite different in appearance. I can, however, show slides which will give some idea of the appearance of recent cases.

I have only recently had Case 4 thoroughly examined by Dr. F. Griffith, one of the pathological Fellows at the Thompson Yates Laboratories, Liverpool. He reports the disease to be an adenoma of the endometrium, and the two photo-microscopic lantern slides he has prepared for me will show you at a glance the nature of the change. You will then see how the glandular tissue has dipped down between the bundles of muscular fibres of the wall of the uterus, and it is probably the presence of these downgrowths of adenomatous tissue that produces the hæmorrhage, and hence the disease.

Hysterectomy was successful in all these cases, and a cure resulted in them all. That resource is only to be had recourse to when all well-known methods have failed, and when sufficient time has elapsed. Eighteen years is, however, too large a slice out of a human life to let pass before using curative means.

Dr. F. A. PURCELL noted that in some of the cases the ovaries had not been removed with the uterus. It was only of recent years that due consideration was being given to a conservation of the ovaries on account of the value of their internal secretion. He thought that the ovaries, if apparently normal, should never be removed.

Dr. MACNAUGHTON-JONES said that, on different occasions, he had brought cases precisely similar to those described by Dr. Alexander, before the Society, in which the adenomatous changes mentioned by him had been



Microphotographs showing downgrowths of adenoma.

present. In the new edition of his book, the macroscopical and microscopical appearances mentioned by him were fully illustrated, and at the last meeting he had shown a uterus in which the cavity was filled with the same gelatinous and mucoid substances as that described by Dr. Alexander. It was due to the breaking down of the epithelial *débris*, and the hæmorrhage was caused by necrosis of the vessels, brought about by pressure due to the glandular change. The subject was a very important one, as the recurrence of the hæmorrhages brought about a most serious condition, and at times a profound anæmia. Curettage was useless as a means of treatment, and the proper course to pursue in these cases, when the diagnosis was made, was to remove the uterus. In certain of these cases the ovaries were also diseased, and if so, they should be removed with the uterus.

Mr. BOWREMAN JESSETT, alluding to the gelatinous condition of the uterine mucous membrane, said he had not the slightest doubt that it was a pre-cancerous condition, and that certainly in the first case referred to, if left alone, it would have developed into malignant disease of the fundus of the uterus; he had seen several cases of the sort, but the diagnosis of such pre-cancerous condition was still obscure. It was a question whether in a woman, aged 40, suffering from persistent uterine hæmorrhage, one would be justified in removing the uterus, if microscopical examination of the scrapings by the curette did not show malignancy? He thought not in the majority of cases. But he was certain that he had seen cases pronounced to be non-malignant after such examination, which afterwards proved to be malignant. If these pre-cancerous conditions could be detected earlier, and the uterus removed in time, many a woman's life would be saved.

Dr. J. A. MANSELL MOULLIN said that though the curette in these cases was not an efficient cure, it was still of great value in diagnosis. When it brought away malignant tissue, the removal of the uterus was clearly the right course to adopt.

Mr. FURNEAUX-JORDAN stated that in the first five cases he had operated upon for this disease he had previously tried in vain to stop the hæmorrhage by the use of the curette, but in the last three cases he operated on had not done so, as he had come to the conclusion that it was not advisable. If profuse hæmorrhage, such as occurred in this disease, was allowed to continue, the patient would probably die before malignant disease had time to show itself. The condition was a most serious one, and required radical treatment.

Dr. ROUTH confessed that in the course of his practice, rather a long one, he had never had occasion to remove a non-cancerous uterus. He had not found scraping of the uterus of much use; much better result would follow the intrauterine application of the strongest carbolic acid. In several cases of persistent bleeding, even with a bad odour, he had cauterised the uterus with a red-hot iron; this had never caused any bad symptom, and the patients had got perfectly well. There was no justification for removing the uterus for hæmorrhage, unless it was certain that the case was one of malignant disease.

Dr. HEYWOOD SMITH thought that in cases met with sufficiently early, intrauterine measures should be tried. Chloride of zinc might destroy the hæmorrhagic condition, and give the uterus a chance to recover itself, nor did he see why the actual cautery should not be applied. Such an application might stop the hæmorrhage, but if not he would then consider the advisability of removing the uterus.

The PRESIDENT, after cordially thanking Dr. Alexander for his paper, said that the question of glandular inflammation was certainly one that at present was attracting great attention from gynæcologists, and the more it was studied the less possible it seemed to draw a definite line between that condition and cancer. There was much in what Dr. Routh had said regarding the treatment of the disease in its early stages. Mr. Lawson Tait employed the actual cautery extensively, and with good results, but it was

questionable whether the condition of the patient after such treatment was better than after the removal of the uterus. He asked Dr. Alexander whether he considered that adenoma of the endometrium was responsible for all the cases of persistent metrorrhagia in middle life for which no tangible cause could be found? He had himself met with cases in which microscopical examination disclosed a growth in the tubes after the removal of the uterus; in others a fibroid thickening of the uterus was all that appeared. The diagnosis was a matter of great difficulty, especially when one had to rely entirely on the symptoms of the patient and the hæmorrhage; he had known instances in which bleeding had been profuse and almost continuous for two or three years, in spite of repeated curettings, and without any assignable cause the hæmorrhage had diminished, and normal menstruation had been re-established. Some years afterwards the patient had continued quite well.

Dr. ALEXANDER, in reply, said that he always left the ovaries behind, as he believed this made the convalescence more satisfactory. He did not think that the disease was malignant; at all events, in his experience it seldom became malignant. His first patient, after eighteen years, did not seem to have any more of the growth than she had at the beginning of that time. In another case the bleeding has been going on for twenty years; the patient is still alive, waiting for the menopause, and probably not any worse now than she was many years ago. Hysterectomy should only be performed in these cases when all other means have been fairly tried and have failed. When this is the case, the treatment, nowadays, of removing a uterus that had become useless and only a source of weakness to the patient, can hardly be called heroic. In these cases the operation is a very simple and safe operation for a very grave disease. He always removed the uterus in these cases *per vaginam*, and did not think there was any reason why it should ever be removed through the abdomen. He thanked the President and Fellows for their very kind remarks on his paper.

ECTOPIC GESTATION.

Dr. R. T. SMITH showed a specimen and read the following notes : The patient was a Polish Jewess, aged 30, married two years, with a child one year old, and the facts elicited were simply that four weeks ago, after two months' amenorrhœa, she was seized with sudden pain in her left side, and from that time had had a sanguineous discharge with clots. Examination revealed a soft swelling in the left side of Douglas's pouch, an old retro-uterine hæmatoma. At the operation, the tumour forming the adventitious sac, so well shown in the specimen, was surrounded by a considerable amount of blood, the escape of which had probably caused the pain. The anterior wall of the tube was extremely thin, and evidently on the point of a second rupture. The patient made an uninterrupted recovery. The interest of the specimen lay not so much in any special pathological feature as in its structural completeness ; the tumour was entirely tubal, the foetus with the head towards the uterus filling the whole tube, and also in the fact that the diagnosis depended almost entirely on the physical examination, the patient knowing so little English as practically to be unable to give any account of her illness.

Dr. BEDFORD FENWICK read notes of

AN UNUSUAL CASE OF DEGENERATING FIBROID,

and showed the specimen.

The patient was 31 years of age, she had been married thirteen months, and was confined on August 4, 1904, at full time. The periods began at 14, had always been regular, lasting six to seven days, always profuse, and with slight pain. Since the labour, she had had increasing losses, and for some time past an increasing amount of most offensive discharge. She has been rapidly losing flesh, colour and strength, and in fact presented the appearance and ordinary symptoms of malignant disease of the uterus. The cervix however, was perfectly healthy, the uterus was enlarged,

the anterior wall being hard and nodular, and the right ovary was large and tense. The sound passed easily $3\frac{1}{2}$ inches forwards, and the uterine canal was quite smooth. Dr. Fenwick therefore diagnosed the case as one of degenerating fibroid, and performed hysterectomy by abdominal section in the ordinary manner. The patient made an uneventful recovery, and rapidly gained flesh and strength, and her colour became normal.

The specimen shows that the anterior wall of the uterus contains two fibroids of about equal size, measuring $3\frac{1}{2}$ inches across, and 2 inches from above downwards. Each fibroid is enclosed in a separate capsule, the upper one being uniformly thick all round. At the lower part of the lower fibroid necrotic degeneration has commenced, and the pus and *débris* were escaping from the small cavity through a narrow opening into the uterine canal, just above the internal os. The case is interesting not only because the specimen is so unusual, but because the symptoms so closely simulated those of malignant disease of the uterine body. It is also noticeable that the right ovarian artery which is obstructed by the fibroid outgrowths at the fundus was greatly thickened, its muscular coat being hypertrophied, and the right ovary was converted into a large blood cyst, containing 8 ounces of black blood, the tube also being swollen and thickened. The left ovarian artery was quite normal in calibre, and the left ovary and tube were perfectly healthy, and Dr. Fenwick emphasised the fact that where the ovarian artery entered the fundus on the left side the area was free from any fibroid outgrowth.

After some remarks from Dr. MACNAUGHTON-JONES, the specimen was referred for a pathological report, on the motion of Dr. Purcell, seconded by Dr. R. T. Smith.

The PRESIDENT said that their Editor had left on the table a copy of Dr. Macnaughton-Jones' "Diseases of Women," and particularly wished to draw attention to the beautiful illustrations of glandular endometritis bearing on Dr. Alexander's communication.

BRITISH GYNÆCOLOGICAL SOCIETY.

THURSDAY, JANUARY 12, 1905.

PROFESSOR JOHN W. TAYLOR IN THE CHAIR.

ANNUAL GENERAL MEETING.

Dr. MACAN drew attention to the Ballot List and to the omission of the office of Assistant-Editor. He had great pleasure in proposing for that office, Dr. J. Hutchinson Swanton. This was formally seconded by Mr. Charles Ryall. Drs. Hodgson and Savage were appointed Scrutineers.

The election of Officers for the current year resulted as follows :—

Hon. President.—R. Barnes, M.D., F.R.C.P., F.R.C.S.

President.—William Alexander, M.D., M.Ch., F.R.C.S. (Liverpool).

Vice-Presidents.—E. Stanmore Bishop, F.R.C.S. (Manchester); Bedford Fenwick, M.D., M.R.C.P. (London); F. Bowreman Jessett, F.R.C.S. (London); R. P. Ranken Lyle, B.A., M.D., B.Ch. (Newcastle-on-Tyne); Sir A. V. Macan, M.A., M.B., M.Ch., M.A.O., F.R.C.P. (Dublin); J. J. Macan, M.A., M.D. (London); H. Macnaughton-Jones, M.D., F.R.C.S.I. (London); Christopher Martin, M.B., C.M., F.R.C.S. (Birmingham); J. A. Mansell Moullin, M.A., M.B., M.R.C.P. (London); Professor Thomas Oliver, M.A., LL.D., M.D., F.R.C.P. (Newcastle-on-Tyne); Heywood Smith, M.A., M.D., M.R.C.P. (London); W. Dunnett Spanton, F.R.C.S. (Hanley).

Hon. Treasurer.—W. H. Slimon, M.D., C.M., F.F.P.S. (London).

Council.—T. Gelston Atkins, B.A., M.D., M.Ch. (Cork); N. T. Brewis, M.B., C.M., F.R.C.P., F.R.C.S. (Edinburgh); G. Roe Carter, M.R.C.P.I. (London); Sir J. Halliday Croom, M.D., F.R.S.E. (Edinburgh); William Duncan, M.D., M.R.C.P., F.R.C.S. (London); F. Edge, M.D., M.R.C.P., F.R.C.S. (Wolverhampton); George Elder, M.D., C.M. (Nottingham); T. J. English, M.D. (London); J. H. Ferguson, M.D., F.R.C.P., F.R.C.S. (Edinburgh); Clement Godson, M.D., M.R.C.P. (London); Arthur Helme, M.D., M.R.C.P. (Manchester); Professor R. J. Kinkead, A.B., M.D. (Galway); J. Macpherson Lawrie, M.D. (Weymouth); Samuel Lloyd, M.D. (London); John Padman, M.R.C.S. (London); Professor Ernesto Pestalozza, M.D. (Florence); J. J. Redfern, M.A., M.D., M.Ch., M.A.O. (Croydon); Charles Ryall, F.R.C.S. (London); R. T. Smith, M.D., M.R.C.P. (London); J. H. Swanton, M.A., M.D., M.Ch., M.R.C.P. (London); Professor J. W. Taylor, M.Sc., M.D., F.R.C.S. (Birmingham); W. Travers, M.D., F.R.C.S. (London); H. F. Vaughan-Jackson, M.R.C.S., L.R.C.P. (Potter's Bar); Hugh Woods, B.A., M.D., B.Ch., M.A.O. (London).

Editor of the Journal.—J. J. Macan, M.A., M.D.

Assistant Editor.—J. Hutchinson Swanton, M.D.

Hon. Secretaries.—S. Jervois Aarons, M.D., C.M., M.R.C.P.; E. Smallwood Savage, M.A., M.B., B.Ch., F.R.C.S.

Auditors.—C. H. Bennett, M.D.; F. A. Purcell, M.D.

Trustees of the Property of the Society.—G. Granville Bantock, M.D., F.R.C.S.; R. S. Fancourt Barnes, M.D., F.R.S.E.; Clement Godson, M.D., M.R.C.P.

TREASURER'S REPORT AND BALANCE SHEET.

Dr. SLIMON said he had much pleasure in presenting to the notice of the Fellows the Balance Sheet for the year ending December 31, 1904. As each Fellow had a copy in his hand, it was unnecessary to say very much about it.

During the year he had received £305 10s. 9d. in annual subscriptions, and in the same period, £105 5s. in payment of arrears. He might draw attention to the fact that on the credit side it had been necessary in some of the accounts to pay for five quarters, which reduced the balance in his hands on the year's working. Still, on the whole it was satisfactory, for there was a balance at the bank of £45 18s. 10d. It was also seen that there was certified to be standing to the credit of the Society in Grand Trunk Railway 4 per cent. Debenture Stock, £270, and a small amount in Caledonian Railway Stock. During the year, they had lost nine Fellows by death, eighteen by resignation, whereas twenty new Fellows had been elected. He moved the adoption of the Report.

Dr. HEYWOOD SMITH seconded the motion, which was carried unanimously.

Dr. BEDFORD FENWICK proposed that a cordial vote of thanks should be accorded to the Treasurer for the extreme efficiency he had shown in the arduous and, he feared, very disagreeable task of getting in arrears, and in connection with his management of the finances of the Society generally.

Dr. C. H. BENNETT said it gave him much pleasure as one of the Auditors, in seconding the vote of thanks to the Treasurer, he felt peculiarly qualified to do so, as his own inspection of the accounts enabled him to judge of the admirable way in which they had been kept and of the labour and thought which Dr. Slimon must have devoted to them.

The adoption of the Report and Balance Sheet and the vote of thanks to the Treasurer were then carried unanimously.

A vote of thanks to the Auditors, Dr. C. H. Bennett and Dr. F. A. Purcell, was then proposed by Dr. MACNAUGHTON-JONES, seconded by Dr. J. JARDINE, carried and acknowledged by Dr. C. H. BENNETT, on behalf of himself and co-auditor.

Dr. J. J. MACAN then submitted the following Report :—

REPORT OF THE EDITOR OF THE BRITISH GYNÆCOLOGICAL
JOURNAL FOR THE YEAR 1904.

The numbers of the BRITISH GYNÆCOLOGICAL JOURNAL issued during the year 1904 appear, on the average, to be thinner than formerly, but this is entirely owing to the change in the paper upon which they are printed. They contain forty sheets or 640 pages, apart from the List of Officers and Fellows in the February number. This list now appears in small pica type, and occupies one-fifth more space than formerly, but the extra cost in paper is more than balanced by the saving in that of composition.

The Proceedings of the Society, lists of New Fellows, and Nursing Examinations, furnish about seven-sixteenths of the contents of the four numbers, that is to say, 279 pages ; Original Communications other than those read before the Society, 76 pages ; Reviews and Publications Received, 53 pages ; and the Summary of Gynæcology and Obstetrics, extends to 200 pages.

The labour entailed in abstracting the short triplicate report for the *Lancet*, *The Journal of Obstetrics and Gynaecology of the British Empire*, and *British Medical Journal*, has, owing to the great length of the shorthand notes, proved very arduous, and I venture to point out that it would be a great help and would also save unnecessary expense, if exhibitors would not only prepare written descriptions of their specimens, as they generally do, but, in reading their notes, would indicate to the reporter when their extempore supplementary remarks are to be taken down. I have several times been handed careful, concise descriptions of specimens, fit for the press, and afterwards found the shorthand reporter's notes encumbered with prolix paraphrases of the same, full of repetitions, and even inaccurate as regards details.

To remove misapprehension from the minds of any Fellows who may not appreciate the difficulty of reducing

to the limited amount likely to be inserted in the journals referred to, the written communications, including very often an important paper, and the shorthand reporter's notes, which in themselves have extended on several occasions in the past year to and over fifty foolscap typewritten folios, I may explain that the amount asked for was "not to exceed 500 words," and that I cannot remember that the space granted by the *Lancet*, which has been more liberal than the *British Medical Journal*, has ever exceeded a column. At our meetings there are often a score of speakers, independent of the author of the paper of the evening, and it has been intimated to me that mention of the names without the gist of the remarks of those taking part in a discussion, is useless, and that no specimen will be reported without details of special interest. Reports exceeding the assigned limit, entail trouble on the Sub-Editors of the Journals, and are cut down or omitted altogether. As a rule, indeed with only one exception in the past year, receiving the shorthand report on Saturday morning, I have been able to deliver my reports at the offices of the papers on the following Monday morning, but this has only been by studying the MSS. already in my hands on the Friday, and by working the greater part, or the whole, of Saturday and Sunday. In addition to these short reports, there is the more complete account to be posted to the *Medical Press and Circular* on or before Tuesday, and finally the preparation of our Proceedings for our own Journal, the comparison of the speakers' returned slips with the first proof, the correction of that proof and the revise, and the preparation of the contents of the Proceedings. This work, formerly undertaken by an Assistant Editor, for the last three years has been done by me, but I am relieved to find that the Council of the Society have, in accordance with the suggestion in my last report, decided on recommending the re-appointment of an assistant editor, for which there are weightier reasons, in the interest of the Society, than the mere amount of the work to be done. At present, in the event of my being

unable from illness, or otherwise, to bring out the Journal, its publication would probably have to be interrupted for a time.

I shall the more heartily welcome the co-operation of Dr. J. Hutchinson Swanton as he has not consented to undertake the work without investigating its difficulties and amount. The efficiency with which he has discharged the duties of Secretary, his experience in that office, his intimate acquaintance with, and keen interest in, the affairs of the Society, assure me that his help in the conduct of the Journal will be most valuable, and personally there is no one I should prefer as a colleague.

Apart from the many valuable papers read before the Society and published in the Proceedings, among which I may perhaps mention our President's Address "On the Diminishing Birth-rate," Dr. Macnaughton-Jones "On Pessaries and their Dangers," Mr. Stanmore Bishop "On Ventral Hernia," Mr. Christopher Martin "On Intractable Prolapse," and Dr. Dudley Buxton "On the Vernon-Harcourt Chloroform Inhaler," the Original Communications occupy 76 pages, and include a remarkable case of hermaphroditism, by Sir Hector Clare Cameron, a very practical paper by Dr. Ludwig Pincus, of Danzig, "On the Treatment of Pelvic Affections by Compression and Position on an Inclined Plane," and other papers of interest.

Reviews of about thirty books by British, American, French, German, Russian and Spanish authors occupy more than 50 pages. I am deeply indebted to those Fellows of the Society who have helped me in this department of the Journal, and note with satisfaction that the more important works published on gynaecology and obstetrics continue to be sent to our Journal for review.

Owing to the variations in the length of the Proceedings in the different numbers of the Journal the Summary of Gynaecology and Obstetrics has necessarily been unevenly distributed, but its total length is the same as in 1903. It covers a very wide field, and I venture to hope draws

attention to almost every current topic of interest to gynæcologists. I gladly take the opportunity of acknowledging the valuable assistance I have had in this part of the Journal, especially from my collaborators, Dr. Frederick Edge, Dr. P. Z. Hebert and Mr. Furneaux Jordan, to whom I desire to express my cordial thanks. I shall be glad to receive, and if possible make use of any condensed abstracts that other Fellows may be kind enough to send me, but, except in connection with more recent observations, such work should not have been more than six months before the profession.

It is gratifying to see that the Summary is being widely studied, quoted, and otherwise utilised both at home and abroad. Seven out of the eight abstracts of gynæcological work contained in the November number of a North British Journal had been noticed in the Summary in our August number; a remarkable coincidence if merely accidental. I not only meet with many quotations from our Journal in American and continental exchanges, but have received several appreciative letters, one referring especially to the notices of American work which generally are from the pen of Mr. Furneaux Jordan.

It has been proposed that the functions of the Finance Committee and those of the Journal Committee of the Council should be entrusted to one body to be called the Journal and Finance Committee. I believe that this course will facilitate the business of the Society, and trust that a closer association with our experienced and esteemed Treasurer will aid me in conducting the Journal with suitable economy.

J. J. MACAN.

In moving the adoption of this Report, Dr. MACAN incidentally added that the reports of the Society's meetings had been regularly inserted in the *Lancet* and the *Journal of the British Empire*, and latterly, also in the *British Medical Journal*.

Dr. HEYWOOD SMITH having seconded the motion, the Report was adopted.

THANKS TO THE EDITOR.

Dr. BEDFORD FENWICK said he had been entrusted with the responsible, and yet most easy task, of proposing a cordial vote of thanks to the Editor for his Report and for his work for the Society during the past year. It was very responsible, because the Journal presented the Society's proceedings to the world at large. And yet it was an easy task, because the manner in which it did so merited the cordial appreciation of every Fellow of the Society. All felt grateful to Dr. Macan for his exertions, and as a former Editor of the Journal he (Dr. Fenwick) knew how difficult the work was, and was aware how much time, trouble and labour it must have cost the Editor to produce the Journal in the excellent way in which it came before them each quarter. He had a further criterion of its value because he was in touch with journals published in many parts of the world, and was frequently struck with the number of extracts from the BRITISH GYNÆCOLOGICAL JOURNAL in their pages, showing that the matter so quoted was up-to-date, and so thought worthy of quotation. He might allude to a point to which Dr. Macan had himself made only slight reference, namely, the work of making the abstracts for the Summary outside the Society's proceedings, fell almost entirely upon Dr. Macan.

Mr. RYALL said it gave him much pleasure to second the vote of thanks to Dr. Macan, their esteemed Editor. He could not add much to what had been so well expressed by Dr. Bedford Fenwick, but he cordially endorsed what he had said.

The motion was carried and briefly acknowledged by Dr. Macan.

SPECIMENS.

In the unavoidable absence of the exhibitor, Dr. George Elder, the notes on his specimen were read by the Secretary, Dr. AARONS.

RUPTURED OVARIAN CYST.

Mrs. B., aged 50, was seen in consultation on Thursday, November 3, 1904. Patient had a well-marked ovarian cystoma of the right side, reaching up to the umbilicus, and was advised to have an early operation performed. On the following Monday (November 7), she came by train some twenty miles to a nursing home, where, in the evening, I saw, but did not examine her, as from her general appearance and absence of complaint, there was no reason to believe that the conditions had changed. Temperature same evening, 97.8° , and pulse 88.

Next morning, on being placed on the operating table, the prominence of the tumour was found to be replaced by a general flattening of the abdomen, and the fluid was diffused. On section, typically viscid, straw-coloured ovarian fluid poured out of the abdominal cavity, and on this being mopped out, the flaccid cyst was felt resting on the right posterior wall, and was removed. As will be seen in the specimen, there were two small ruptures, and in other places the wall has been much thinner.

Subsequently, on questioning patient, she stated that on the Saturday evening she had some severe abdominal pain and sickness, which kept her in bed all Sunday, but did not seriously upset her general condition nor prevent her taking the railway journey on the Monday. The smallness of the openings would account for the fact that the rupture was not followed by shock and the slight disturbance to her health was due to the benign character of the fluid. Some sudden distension of the cyst on Saturday evening, due probably to a slight twisting of the pedicle, may have caused the rupture.

My reason for bringing this specimen before the Society is that it not only illustrated one of the rarest and gravest accidents to which ovarian cystomata are liable, but also emphasised the principle so often insisted upon before the Society, that is, the importance of counselling immediate operation whenever a tumour of this nature is diagnosed.

As Dr. Elder was not present, the case was not discussed.

Dr. J. INGLIS PARSONS showed a specimen of—

DOUBLE PYOSALPINX.

Mrs. B., aged 35, a patient of Dr. Frye, was admitted on November 18, 1904, complaining of severe pain in the abdomen, which had confined her to bed for six weeks. She had been married twelve years, but had had no children or miscarriages. Her menstruation had been regular, but profuse, and accompanied by severe pain for a few days preceding the flow.

Six years ago she had a severe attack of pelvic inflammation with much pain. On examination, a hard, irregular tumour was found on both sides of the uterus. Temperature normal.

November 22.—On opening the abdomen the intestines were found adherent to, and almost covered by, two masses, one on each side of the uterus. After separating the intestines further inspection revealed enlarged tubes bound down by extensive adhesions matted to the uterus. These were removed with some difficulty, but without rupture.

The patient made an uninterrupted recovery and left hospital three weeks after operation.

He added that the points of interest were the symmetrical enlargement on each side, and the fact that the tubes had been got away without opening them. Those who had operated in such cases would know how difficult it sometimes was to do this when the intestines had been forming a sort of roof to the uterus and tubes, and one had to deal with dense adhesions. He began by separating the adhesions from underneath the back of the uterus, and in time both tubes came up successively, and could then be removed.

Dr. JERVOIS AARONS asked whether a diagnosis of double pyosalpinx had been made before operating on the case, or

the blood examined for leucocytosis in view of the possibility of pus being present in the pelvic cavity.

Dr. ROBERT BELL said he had come across many cases of pyosalpinx, and all were bilateral and very easily removed. The specimens of one case he showed to the late Professor Joseph Coats, who placed them in the Pathological Museum in the Western Infirmary, Glasgow. He had seldom met with adhesions in connection with pyosalpinx, and found little difficulty in their removal.

Dr. MACNAUGHTON-JONES said that his experience did not correspond with that of Dr. Bell. He had, again and again, found pyosalpinx with extensive adhesions, nor was their removal always easy. Indeed, some of the most difficult cases in gynæcology were those of pyosalpinx, in which the tube was absolutely embedded in adhesions, with a plastic wall completely surrounding it. It was only when one broke through this wall that the pus in the tube was reached. Neither was pyosalpinx necessarily bilateral. Tuberculous pyosalpinx, for instance, frequently affected the tube on one side only. He had exhibited two such specimens before the Society; one was a large pus sac, and the patient from whom he removed it had since borne three children.

Dr. HODGSON asked if Dr. Parsons had noticed whether the adhesions in pyosalpinx were much more extensive than in hydrosalpinx.

Dr. PARSONS, in reply, said the temperature in this case was normal while the patient was in hospital, and that was frequently the case. It was a very old case, and he believed the absence of fever was due to the fact that the system had become accustomed to the presence of the toxin. Probably the condition had existed before marriage, and was the cause why the patient had remained sterile for twelve years. He was willing to admit that he did not diagnose pyosalpinx before operation, as it was impossible to form an accurate opinion owing to tenderness on examination. He could not agree with his friend, Dr. Bell, about the absence of

adhesions in pyosalpinx, but must concur with Dr. Macnaughton-Jones that such cases were sometimes the worst which gynæcologists had to deal with. He would rather do a hysterectomy than operate upon some cases of pyosalpinx. The worst case of the kind he had seen was one in which he assisted one of his juniors at the operation. Both his colleagues were present, and they advised him not to proceed, but sew up the abdomen, which was accordingly done. In another case, a very bad one indeed, it was impossible to remove the sacs without leaving a large raw surface, and the patient died of intestinal obstruction some fourteen days after the operation. His experience was that one met with much worse adhesions in pyosalpinx than in hydro-salpinx; and it was sometimes most difficult to separate the bowel without tearing it, particularly if the case was recent.

The PRESIDENT then delivered his

VALEDICTORY ADDRESS.

Each Annual Meeting of the Society reminds us that we have reached another stage in its progress, another landmark on the journey of life, the summit of another hill from which, as our bent inclines us, we can look backwards or forwards. It is a camping ground or resting-place, where, as previously arranged, one section of the journey done, the titular head of the Company falls back into the ranks, and another takes his place to lead his fellows on the journey of the morrow. But before the change is made, it is only fitting that we should glance for a few moments at all that has taken place since last we gathered at our Annual Meeting. We have to regret the loss of nine Fellows of the Society by death, and among them two of the most distinguished, Dr. Engelmann, of Boston, who died at the close of 1903, and Dr. Milne Murray, of Edinburgh, in February last. The profession generally, and gynæcology in particular, has also suffered severely by the death of Mr. Knowsley

Thornton, of the Samaritan Free Hospital, and that of Dr. William R. Pryor, of New York, and we cannot but feel distinctly the poorer and weaker for their absence. "They rest from their labours," and it is for us, and especially for the rising generation among us, to enter into those labours.

Passing on to a brief consideration of the year's work, we may well enquire what lessons are to be learned from the treasures, new and old, of which we have become the depositories. The year through which we have just passed, though in some respects quiet and uneventful, has been one with which we have very good reason to be satisfied, for the work which has been done has been perhaps as good, and quite as productive, as that of any preceding year. Several of the Papers read before the Society have not only been of high value in themselves, but have opened up more or less fresh ground for future work. For example, the communications of our President-elect, Dr. Alexander, and of Dr. Macnaughton-Jones, on the severer forms of hæmorrhagic endometritis, dealt with a subject still imperfectly understood, and one upon which the clinician, the pathologist and the surgeon may all still work with advantage. And after listening to the valuable paper of Mr. Christopher Martin on the extirpation of the vagina and uterus for incurable prolapse, and to the discussion arising from it, who can doubt that the definite recognition and isolation of the pelvic fascia involved in the course of this operation will not encourage many other workers to better knowledge and better workmanship in the repair of hernial protrusions from the vagina?

New ground, too, was broken, if in a different way, by the joint communication of Dr. Dudley Buxton and Mr. Vernon Harcourt on Chloroform Inhalation, and something of the same tendency may be noticed in many of the shorter papers and reports of cases; in Dr. Spanton's paper on Bladder Irritation, Dr. Helme's on Spinal Puncture for Eclampsia, Mr. Jessett's case of Gangrene following Hysterectomy, Dr. Fenwick's cases of Myomata, Dr. Edge's

Splenectomy, Mr. Jordan's Vaginal Ovariectomy, Dr. Tredgold's case of Violent Menorrhagia treated by adrenalin, and others. I should like to say more on this subject, if I had time, for we cannot too warmly welcome, or too highly appreciate, any communication which brings individual thought and experience to bear on the greater problems of gynecology, and which shows a wise originality, either in conception or in practice. And such communications are not only ever welcome at the meetings of the Society, but find a permanent and honourable setting in its archives, in the Journal of the Society, where through the laborious researches of the Editor and his collaborators this material is being continually supplemented by records of all that is best in Continental and American thought and practice.

Another duty, and a more personal one, demands my next consideration. Every provincial President, as you are doubtless aware, has to lean very much on the kindness and consideration of those who are more permanently engaged in ministering to the success of the Society. Apart, then, from, or in addition to, the Votes of Thanks which have already been given by the Fellows to our chief Office-bearers, I desire to tender my most hearty personal thanks to my colleagues on the Council who have so generously overlooked my shortcomings and so often supplied my place, and especially to our Secretaries, Dr. Swanton and Dr. Aarons, for numberless acts of kindness, to our esteemed Editor for his uniform readiness to help, and his patience over my illegible hand-writing, and, finally, to my indefatigable representative at the Council Meetings, Dr. Macnaughton-Jones. This done, however, I am free to say something about the work we have undertaken, and which binds us together. Looking back on the journey over which we, as a Society, have travelled, I find the history of this Fellowship somewhat strangely coterminous with the history of my own chief life-work.

Twenty years ago I joined you as a Foundation Fellow, and for twenty years I have been engaged in the practice of

operative gynæcology. The accompanying table gives a yearly record of all the abdominal sections I have performed on women during this period. The cases are strictly consecutive, and the total number of sections is 1,291. The total mortality is 85, or 6·5 per cent.

On examining this mortality more closely, I notice that a large proportion of the deaths were unavoidable, or were only indirectly due to the operation. One patient was attacked by apoplexy during anæsthesia, and eventually died from this, the operation (a resection of bowel) being perfectly satisfactory, as proved by *post-mortem* examination. Five of the patients suffering from acute perforative peritonitis, and four with intestinal obstruction, were almost moribund at the time of operation, and many others (no less than twenty-two) suffering from malignant disease, died rather from the original affection than from the operation, exploratory or otherwise, which was undertaken for their possible relief.

There are, however, certain other cases of failure which are and must remain a trouble to me. Specially some early cases of sepsis after operation, one case of secondary hæmorrhage, and finally, some cases of difficult myoma operated upon during a time of transition, when the old operation of the clamp (perfected so far as it could be, I think, by a method of my own), was slowly giving way to the more modern and better methods of supra-vaginal amputation and pan-hysterectomy.

I did the (then) more difficult operation under very bad conditions, and my work suffered accordingly. If I and some of my patients had been able to wait for riper experience, I think the result in all of these cases might have been different. In one instance of a neglected myoma, I met with a greater amount of peritoneal displacement than I have ever seen or read of elsewhere, and it may perhaps be of service to record it here. The descending and transverse colon had been raised by the growth of an enormous tumour of the left side so that the transverse colon passed

YEAR.	1883	1884	1885	1886	1887	1888	1889	1890	1891
Exploration					3	4	6	4	3
Ovariotomy			2	1	7	3	7	12	15
Double Ovariotomy							2	3	3
Abdominal Hysterectomy									
Myomectomy									
Conservative Operations—									
Hysteropexy, Salpingostomy,									
Igni-puncture of Ovaries, &c.									
Removal of one or both Append-									
ages for—									
Tubal Disease			1	3	3	2	5	3	9
Myoma			1	2	1	3	7	7	7
Acute Septic Ovaritis						1	1	1	
Chronic Ovaritis				1				3	3
Infantile Uterus									1
Bleeding					1				
Peripheral Neuritis and Mental									
Weakness									
Varix of Broad Ligament									
Abdominal Enucleation of Cysts									
of Broad Ligament				1		1	2	1	
Ectopic Gestation, Removal of						1		2	2
Cæsarean Section									
Hysterotomy for Inversion of									
Uterus									
Incision and Drainage for—									
Peritonitis (Septic, Tubercular)	1			1	4		1		1
Ascites		1	1						
Papilloma				1		1			
Cancer					2				
Abscess						3		1	4
Radical Cure of Hernia									
Operation for Intestinal Obstruc-									
tion									
Colotomy						1	1	2	
Gastrotomy, Pyloroplasty, &c.							1		
Gastro-enterostomy									
Excision of Intestine									
Removal of Appendix									
Removal of Mesenteric Tumours									
Cholecystotomy and Choledo-									
chotomy		1			1	1		2	1
Excision of Gall Bladder									
Excision of Hydatids									
Nephrectomy									1
Vaginal Conservative Operations.									
Vaginal Cœliotomy with Abs-									
cess-drainage, Igni-puncture,									
Vaginal Fixation, &c.									
Vaginal Hysterectomy									1
Vaginal Ovariotomy									
Vaginal Enucleation of Broad									
Ligament Cyst									
TOTALS	1	2	5	10	22	21	33	41	51
MORTALITY					5	2	2	5	0

1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	Totals	Mortality
2	3	2	0	1	1	3	4	1	2	1	1	2	43	8
12	16	10	11	13	15	17	15	12	14	8	9	8	207	11
4	2	5	7	3	1	7	...	3	4	2	...	4	50	4
4	3	2	7	6	4	2	4	4	7	9	14	6	72	15
...	...	4	1	...	...	1	...	1	...	1	...	2	10	—
2	7	13	4	1	...	3	3	3	4	7	5	8	60	1
9	20	17	11	12	8	5	3	3	3	7	4	7	135	5
16	19	14	11	6	10	14	6	8	4	4	4	4	148	7
...	...	...	...	...	...	...	...	...	...	...	...	...	3	2
1	...	...	...	2	...	2	...	2	...	1	1	1	16	—
...	...	...	...	...	...	...	...	...	1	...	...	...	2	—
...	...	...	...	...	...	...	...	...	...	...	...	...	1	—
...	...	...	...	...	...	...	...	...	...	...	...	1	1	—
...	...	...	...	1	...	...	...	...	...	1	1	1	4	—
...	4	2	1	3	...	1	2	1	1	...	2	1	23	1
5	4	5	7	6	3	5	6	4	1	4	1	1	57	2
...	...	...	...	...	...	...	...	...	1	1	3	...	5	1
...	...	...	...	...	...	...	1	...	...	...	...	...	1	—
3	2	8	3	5	4	...	4	3	4	2	6	2	54	5
...	...	...	1	...	...	...	...	...	...	...	...	1	4	—
...	...	1	...	...	...	...	...	...	...	...	...	...	3	—
2	2	5	2	...	2	...	3	...	1	1	...	...	20	2
7	5	1	1	3	1	6	1	1	...	...	1	1	36	4
2	1	7	6	1	...	4	10	5	3	4	4	8	55	2
...	...	1	...	1	...	1	...	1	1	...	...	...	5	4
...	...	...	...	2	...	2	1	1	...	2	3	4	19	2
...	...	...	...	...	...	...	...	...	...	...	1	1	3	—
...	...	...	...	...	...	...	...	...	...	...	1	...	1	—
...	...	...	...	1	...	1	...	...	...	1	1	...	4	2
...	...	1	1	3	2	2	4	2	3	5	7	4	34	1
...	1	...	...	...	...	...	...	1	1	...	...	...	3	—
...	1	...	5	2	1	3	4	6	2	4	...	4	38	2
...	...	...	...	...	...	...	1	...	1	...	...	...	2	—
2	...	2	...	...	1	4	1	...	1	...	...	2	14	—
...	...	...	12	12	3	3	8	9	13	5	4	7	76	2
...	...	2	4	10	10	11	8	6	4	5	3	8	72	2
...	...	...	1	1	...	1	...	1	2	2	...	1	9	—
...	...	...	...	...	...	...	...	...	...	...	...	1	1	—
71	90	102	96	95	66	98	89	78	77	77	76	90	1,291	—
1	6	7	8	9	10	7	6	3	6	2	5	1	...	85

from right to left across the middle of the back of the tumour, and the omentum formed a cap covering the summit of the growth and falling to some extent over its anterior surface. The almost irresistible inference at first was that the transverse colon was adherent to the back of the tumour. It was indeed closely attached everywhere to the tumour, but by peritoneal displacement, and not by adhesion.

In concluding here my references to the record of deaths, I think I am justified in noting that I have, I hope, learnt something from my failures, and that in spite of, or rather perhaps, by virtue of, advancing years, and by virtue of some teachableness, my last five or six years of work have been my best years, and the last year is, on the whole, the best of all, giving, with a fair proportion of grave and important work, a death-rate of only about 1 per cent.

This, I think, may deservedly give more weight to the remarks I wish to make on the progress of my practice. I have lived in frankly septic days, when from ignorance, little or nothing was left undone that could encourage sepsis; in days of more or less empirical asepsis, when men were stumbling, as if blindfold, towards a path of safety; and in later years, when the darkness had lifted and one could see the plain outlines of the road which led towards the goal. All this time, during which I have myself been working, has been a time of searching for better methods of asepsis, and a time of experiment in this direction.

The first dawning for me (I speak for myself) came with the definite recognition of the mathematical value of heat in sterilisation. The full grasp of this all-illuminating fact made the continued use of the old sponge impossible, and this was cast aside for the artificial sponge of gauze, which, like the instruments, the towels and the dressing, could be subjected to a really sterilising bath or atmosphere.

Next to this, there is nothing which has given me so much satisfaction and confidence in all my later work as

the adoption of the permanganate of potash and oxalic acid method of Kelly, for the sterilisation of the hands of myself, assistant, and chief nurse or nurses. This method, first introduced at Sparkhill by my colleague, Mr. Martin, and supplemented in my own practice by the additional use both of methylated spirit and solution of the red iodide of mercury—a method employed, not only at the time of operating, but immediately after touching any case or dressing that may leave serious contagion behind it—has proved much more reliable than anything I had previously tried. It is not difficult to obtain, the drugs are common and inexpensive; it requires no measurement, the solutions are saturated; it is not hurtful to the hands, as are all the carbolic acid compounds and derivatives, and I do not think that since I have regularly employed it I have had any case of sepsis that can be reasonably referred to hand infection. I believe if this method were generally used by practitioners and nurses, not only before the operative work of a confinement, but immediately after any dangerous contact in ordinary practice, it would be possible to eliminate the danger that undoubtedly still remains in private midwifery practice.

Perhaps you will pardon a palpable digression if I briefly relate an instance which seems to throw some side-light on the value of the method.

The children of a practitioner who was well known to me, had suffered for several years from tinea tonsurans. They had received the best dermatological advice and treatment, but the disease persisted, and threatened to injure or stop their education. The skin was unbroken, and I suggested that the method I used for my hands should be applied to the children's heads. This was done thoroughly, and within a few months no trace could be found of the complaint.

This is, of course, only a single instance, but others, who have more opportunity than I have of testing its value, may be inclined to employ it further.

Next to the use of prolonged boiling and steaming for the sterilisation of everything necessary to the operation that can be so treated, and to the employment of the fortified Kelly's method for the hands, I know of no change which has been of greater service in my work than the discarding of the comprehensive single stout ligature—like the Staffordshire knot—for the control of the pedicle or broad ligament, and the use, instead of this, of a series of finer interlocking chain-ligatures.

These, if of silk, can be readily made aseptic by boiling in biniodide of mercury solution (one per mille), so that every vessel can be controlled by its own sterilised ligature with but little or no tissue intervening, and this without causing any tension or dragging. In this way I am convinced the operator can best ensure himself against any danger of subsequent hæmorrhage.

I generally use a sharp, widely-curved needle of sufficient size to carry the No. 3 or No. 4 ligature silk easily. I thread it with a long length of silk and pass the needle through the broad ligament close to the ovarian vessels. One strand of the double silk is then cut, forming the ovarian ligature. The remaining strand is pulled further through the eye of the needle, and the needle passed back through the broad ligament near to, but not including, the uterine vessels. The needle is cut off, leaving two further ligature loops, one for the uterine vessels, and one for the middle of the broad ligament. The ligatures are interlocked, and the pedicle tied in a chain of three ligatures. More may of course be used if this is considered advisable.

Closely connected with the use of this method of ligature is the employment of finer silk. Obviously, if but little beyond the vessel is enclosed in the ligature, finer silk may be used with perfect safety, and I employ this extensively both for the ligation of vessels and for the suture of peritoneum and fascia in the closure of the abdominal wound.

In fact, for many years now, I use nothing but silk and silkworm gut, finding that the finer sizes of the silk can be

adequately sterilised by half an hour's boiling in biniodide solution, and that in time they are as perfectly absorbed as catgut.

Bearing, I believe, on the same point of aseptic ligatures, is the interesting question of what has become of the lost disease, "pelvic hæmatocele," or, as some prefer to call it, "broad ligament hæmatoma." Years ago it was one of the commonest complications of the convalescence after operation. In our own hospital I remember the time when four or five patients were lying side by side, and all suffering from this same affection. Now it has so universally disappeared that I can easily imagine a student and observer of the present day hesitating to accept the experience of the older ovariologists on this subject. What is the cause of its disappearance? Many appear to have thought that the hæmatocele was secondary to some puncture of a vessel in the broad ligament, due to the use of a sharp-pointed needle (though the favourite time of its onset was not until nine or ten days after operation), and that the accident was to be prevented by using a blunt pedicle needle. In the practice of several, the change in the use of the needle has been coincident with the disappearance of the tumour, but I believe it has been simply a coincidence.

As I have already said, I have largely gone back to the use of a sharp-pointed needle, but without finding any recurrence of the hæmatocele. In the older days I think the silk used for tying the pedicle was often septic, and a slow process of ulceration occurred, opening the vessels about a week or so after the date of operation.

In turning now to the consideration of special operations, I notice first, that the removal of the uterine appendages for myoma has slowly given way in my practice to the operation of hysterectomy, both abdominal and vaginal, but I have not entirely given up the older operation. As I have, however, quite recently published my opinions on

the choice of operation in myoma,¹ there is no necessity for me to refer to it again, and I pass on to notice the marked change which has taken place in my practice regarding the removal of the appendages for tubal disease, and especially for disease due to gonorrhœal salpingitis.

The cases of this, numbering 20 in 1893, and 17 in 1894, have come down to an average of 4 or 5 in the last five years, and that this is not due simply to the adoption of vaginal rather than abdominal methods of operating is seen at once on looking at the statistics of both operations. The change is, of course, due to the systematic carrying out of the mercury and iodine treatment in all cases of gonorrhœal salpingitis, as advised by myself in the paper I read before the Society in 1899.

Not only is the operation of removal needed much less often than formerly, if this be done, but when acute pyosalpinx makes an immediate operation imperative, a vaginal cœliotomy with thorough emptying of pus sacs and drainage, followed up afterwards by treatment with the biniodide of mercury is, in many cases, a better method of treatment than that formerly adopted. I shall, however, have to refer to this again later. The after history of these cases, so far as I have been able to follow it, compares very favourably with that of the older cases of extirpation.

It may be well to note here that the gist and point of my previous communication on this subject has been very insufficiently grasped by many who have spoken and written regarding it.

The value of the treatment has nothing whatever to do with syphilis or its possible complications. Experience appears to show that the biniodide of mercury has a direct curative power in gonorrhœa, being probably slowly destructive to the gonococcus in the tissues.

Perhaps another digression may tend to enforce this.

A gentleman contracted a gonorrhœa after an impure

¹ *Journal of Obstetrics and Gynecology*, August, 1904.

connection, and thereafter was troubled with a slight gleet which he could not cure. He became engaged to be married, and for eighteen months resided abroad, where he somewhat naturally either forgot his slight ailment, or at all events, let it alone. He came back to England three or four months before his proposed marriage, and sought the very best advice for the cure of his gleet. Instruments were passed, he was assured that he might marry with safety, but the discharge was slightly increased rather than diminished by treatment. He married, and within six weeks his young wife was suffering from double pyosalpinx with dangerous symptoms of peritonitis and high pyrexia. Pus had already formed, and the disease was much too acute for medicinal treatment alone to stay its progress.

I opened the pouch of Douglas, separated the adhesions, evacuated pus on both sides of the uterus and carried out prolonged pelvic drainage with iodoform gauze, keeping the patient all the time under treatment. She made a slow but very perfect recovery, and during this time I saw a good deal of her husband. He was still suffering—almost imperceptibly—but still suffering slightly from his chronic gleet, and I thought I had sufficient grounds for suggesting that he might very reasonably adopt the same medical treatment as that given to his wife. Both patients recovered completely. This is nearly five years ago. Shortly after his wife's recovery they went abroad to live, and have, I understand, enjoyed the best of health ever since. Only a few weeks ago, a doctor who was associated with me in the treatment of the case, stopped me very kindly to tell me of the very good health that both had enjoyed since they were under our care.

Turning now to the question of inguinal colotomy, there is a small detail in its performance which has proved of very great comfort to myself, and as I have never seen it mentioned by others, I think it may be of service to describe it. I generally use the method introduced, I

believe, by the French surgeon, Reclus, in which a spigot of glass is passed through the mesentery under the bowel, and the loop of colon rides over this protruding from the incision. I guard against any danger of further protrusion of bowel by sewing the peritoneum to the loop of bowel all the way round by a continuous suture of fine silk. This, however, is not the innovation to which I want to draw your attention.

The bowel, as I daresay you know, is usually divided by the cautery straight down to the spigot on the third or fourth morning. Now this, though practically painless, I found out to be a very awkward proceeding on account of hæmorrhage. As many as five or six large arterial vessels spouted at the deepest part of the division. The loss of blood was considerable. The clumsiness of the proceeding was manifest to the patient, who was quite conscious, and there was decided pain and discomfort in seizing the bleeding points and applying ligatures. This may be entirely avoided, I find, by passing a ligature on each side of the spigot at the original operation and tying off a small amount of mesentery. The tying of the mesentery cuts off the full blood supply from the line of opening, and makes the subsequent division of the bowel right down to the spigot, practically bloodless.

Speaking generally and very broadly, conservative operations on the uterine appendages by abdominal section have rather disappointed me, the benefit derived being rarely worth the mark of the abdominal incision. In order to understand me rightly, however, it may be necessary to define more exactly what I mean by conservative operations on the appendages. I include in this the undoing of adhesions involving the appendages, but not those specially involving intestine. Some of the most perfect successes I have had after operation have been due to the undoing of intestinal adhesions, which caused incomplete obstruction, and were a daily source of pain and misery, but were

accompanied by no tangible lesion on examination. These obviously are essentially intestinal operations, whatever may have been the cause of the original inflammation.

Again, though a few cases of hysteropexy and ventrosuspension have been included for the sake of convenience in my tabular statement (and rightly included) as "conservative operations," they are not really conservative operations on the uterine appendages.

By this term I chiefly mean salpingostomies, partial excision of the ovaries, ignipuncture of the ovaries, and shortening of the ovarian ligaments, with or without separation of adhesions from above; and it is these operations which appear to me to have been rather disappointing.

Some patients have been relieved, but few or none have reported themselves as quite well afterwards. In some cases the operation has appeared to do harm, and I have had to remove the appendages afterwards. In one case (and one only) has the operation been followed by a pregnancy. None of these operations have been undertaken rashly. On the contrary, I do not know any class of case in which I have expended more thought, caution and ingenuity—if I may term it so—in treatment.

In some of these cases—and this is a point which needs consideration before operation is proposed—I think there has been throughout some fatal want of correspondence between the sexual organs or functions of husband and wife which vitiated every attempt to give the patient perfect comfort. The utero-vaginal prolapse, painful retroflexion and prolapse of ovaries, met with in some of these cases seem to be due directly to this, and to be consequently almost incurable.

It may be a hard thing to acknowledge and accept, but some women are undoubtedly unfit for the married life which has fallen to their lot, and no mere operative change can make them otherwise. For simple prolapse of ovaries due to backward displacement, the operation which has

given me the best final results is that of simple shortening of the round ligaments without needless opening of the peritoneum.

My vaginal operations call for some passing commentary. I was considerably attracted at first by anterior vaginal cœliotomy, but have now practically abandoned it, as I dislike all methods of uterine fixation. But posterior vaginal cœliotomy has, in many ways, become more and more attractive to me. I recognise that it has a very special field of its own, and this field of usefulness needs a better recognition by the general, as well as by the gynæcological surgeon. There are, for example, certain conditions requiring operative treatment in which the vagina is so infinitely better as a route for approach and treatment that I have no hesitation in saying the neglect of this and the use of the abdominal route instead may amount to bad practice.

Acute pelvic peritonitis due to gonorrhœa, when the mischief is mainly behind the uterus, and abdominal distension, peritonitic vomiting and sleeplessness from pain form a triad demanding immediate interference, is, as I have already said, pre-eminently such a case—a case for vaginal, rather than abdominal, operation.

Again, in some cases of abscess due to appendicitis, the pus tends to collect in the pouch of Douglas, while adhesions roof in the abscess from above. In such cases the proper method of exploration is by the pouch of Douglas, and a life may easily be unnecessarily sacrificed by choosing the more usual incision. Even in virgins and young children the possible advantage of this route should never be forgotten or overlooked.

Again, a perirectal abscess in the pelvis—sometimes a long-neglected pyosalpinx—not infrequently opens at the upper limit of the abscess sac into the rectum and discharges into this by overflow rather than by emptying. The patient falls into a condition of hectic, and, as some instructive *post-mortem* preparations show, has often died of

her disease. Such a pus sac may, of course, be occasionally removed successfully from above, but in the condition of which I am speaking, the better practice is immediately to freely open up the pus sac from the pouch of Douglas or directly from the vagina, and establish rational drainage from the most dependent portion of the abscess. This is generally sufficient to ensure a quick and permanent recovery.

Again, there are cases of thrombotic pyæmia after parturition in which suppuration occurs in the immediate neighbourhood of the thrombus. The disease may sometimes be stopped and the patient cured by evacuation of the pus and gauze drainage well carried out either through the pouch of Douglas or between the layers of the broad ligament. Some cases of this kind (included in my list) I hope to report more fully at a later period. All of these cases can only be treated satisfactorily by vaginal surgery.

With less certainty, but still with marked advantage in special instances, vaginal ovariectomy and vaginal enucleation demand increasing consideration. I find I have used these operations, in ten or (really) eleven cases and under certain conditions, as when a single cyst is blocking the pelvis during labour and preventing a delivery, I hold vaginal ovariectomy as more than a fair alternative, but distinctly superior to abdominal removal. The great point of the *technique* of posterior vaginal section, apart from the disinfection of the vagina, is the use of the iodoform-gauze drain behind the uterus instead of any suture of the incision. This applies to vaginal hysterectomy also, unless the sutures and raw surfaces are turned well outside the peritoneum, as in the German method. The gauze drain prevents any danger of intestinal adhesions at the site of operation and effectually guards the patient from an adherent retroflexion as a late result of the vaginal interference. I often leave the drain *in situ* for twelve or fourteen days before removal. The only time when I have chosen closure instead of drainage has been when doing a vaginal ovariectomy during labour.

In this retrospect of work, I have endeavoured to touch lightly but firmly on the main points which strike me as definitely calling for reference. With the exception of the two digressions, I have written as tersely as I could, and much in the same way as one talks to a friendly colleague in the operating-room, when the operation is over and the surgeon for a brief period opens his heart and strives to give, as best he can, a simple statement of his work and the reasons of his practice.

The comradeship of the Society may, I hope, be trusted to condone any want of circumstance or ceremony in this presentation of my address. We are all travellers in a common journey, travellers who, in the graphic words of Mr. Cunninghame Graham²—"kicking at our horses sides, straining our eyes, keep pushing forward, stumbling and objurgating on the trail." But we are more than this—we are explorers in an unknown country where, over and over again, no man has trod before us, where no certain trail can be found for us to follow, and where the talk round the camp fire at night, when occasion calls for it, cannot well be less or more than plain and straight and truthful.

Before I vacate the Chair, Gentlemen, I want to say for you all and for myself, some words of welcome to our new President, Dr. Alexander. He is well-known all over the world and nowhere, perhaps could we have found one whose reputation, ability, and kindness of heart so naturally entitled him to the honour and confidence of his fellows. We welcome him most heartily as our President, we assure him of our loyalty and support, and wish him every happiness and success in this his year of office.

Dr. MACNAUGHTON-JONES said that on several occasions he had had to propose a vote of thanks to a retiring President, but had never done so with more diffidence than

² Preface to *Mogreb-el-Acksa*, 1898.

on the present occasion. After the comprehensive summary of interesting and valuable work the President had given, he felt it a responsible task adequately to express the feelings of the Society, or convey a due appreciation of that work. Professor Taylor had not been surpassed by any of his predecessors in the assiduity with which he had attended the meetings of the Society and directed its proceedings. The address just delivered was most suggestive, and would form one of the most valuable statistical records which had ever appeared in the *Journal*. One fact struck him particularly. During the last four years of his work Professor Taylor had performed 36 abdominal and 20 vaginal hysterectomies, 56 in all; and during the same period 320 operations of all kinds. As of that number 56 were hysterectomies, and among the whole 320 there had been but 14 deaths, the low rate of mortality was a convincing proof of the merit of Professor Taylor's work. He was also struck by the fact that 57 operations for extrauterine pregnancy, and various complications associated with it, had been done, with only two deaths. Furthermore, 38 cholecystotomies, including excisions of the gall-bladder, had been done, with only two deaths, and of the 72 vaginal hysterectomies in the table only two were fatal. The Society might congratulate itself on having had as a President one who could bring before it such a perfect record of surgical work. The President had recommended a valuable detail in practice which was too often neglected. Operating surgeons had necessarily to come into contact with septic influences and make examinations involving septic infection, and he urged that, immediately after contact with such septic conditions, they should always use a powerful antiseptic. This advice should be borne in mind by every operating gynæcologist. Professor Taylor was the third President of the Society who had come from the Birmingham School, a school which must always hold a high place in the annals of gynæcology. The most original obstetrician which the United Kingdom had produced was

Simpson, of Edinburgh, but he would say unhesitatingly that Lawson Tait was the most original gynæcologist that England had ever produced. Another familiar name, which one was proud to see on the list of Honorary Fellows, had been associated with Birmingham in their minds since their student days, was that of Savage. With these illustrious men Professor Taylor was fitly associated. No past President of the Society had more completely gained the esteem of its Fellows than had Professor Taylor; they wished him every success in his practice, long life, and every prosperity, and hoped that he, who had hardly reached the zenith of his fame, would on many future occasions grace their proceedings by his learning and vast experience.

Dr. HEYWOOD SMITH seconded the vote of thanks to Professor Taylor for his able address and for his conduct of the business of the Society during the past year. He cordially endorsed all the proposer of the resolution had said in appreciation of what the President had done during his term of office. His conduct, both on entering the Presidential Chair and on leaving it, had been characterised by great courage. The Society would never forget the outspoken address with which he inaugurated his term of office, which had been referred to and quoted extensively by lay journals, and had started a discussion which ought to result in an improvement in the social morality and birth-rate in this and other countries. They were also extremely grateful for the address just delivered, and it was a great encouragement to the younger specialists in that branch of surgery that by similar earnestness and attention to details they might hope to emulate the President's success.

The motion having been carried by acclamation.

The PRESIDENT thanked the Fellows very warmly for the kindness which he had received since he was elected President. His year of office had been a very happy one, and he wished the Fellows a very successful and pleasant session under the Presidency of his esteemed successor, Dr. Alexander.

ORIGINAL COMMUNICATIONS.

A VISIT TO CLINICS AT GHENT, BONN AND BRUSSELS,
WITH SOME REMARKS—PATHOLOGICAL AND PRACTICAL.By H. MACNAUGHTON-JONES, M.D., M.Ch., M.A.O. (Hon.-
Causâ), &c.*Ghent.*

AT the end of last year I had the opportunity of visiting Ghent. Dr. Eugene Boddaert, one of our Fellows, and Assistant to the Surgical Clinic of the University, was most courteous in showing me all the latest improvements effected there. He is the son of the Professor of Clinical Medicine in the University who has a warm appreciation of the teaching he received in London at the hands of Lionel Beale, Fergusson, Erichsen, Luther Holden, Savory and West.

The new University clinics are practically completed and include a series of lecture and clinical theatres, as perfectly furnished with every modern accessory, as can be seen anywhere. They are well worth visiting. The civil hospital is a short distance from the University, and contains several operating theatres. There are in all 710 beds, 311 for men, 244 for women and 155 for children. I saw an interesting operation performed by Dr. Bersacques, one of the surgeons. This was the removal by the circular incision, of a large sacculated tuberculous kidney, completely fixed by numerous surrounding adhesions. The age of the girl was 13. It was one of those cases in which ureteral catheterisation for the purpose of early diagnosis would have been of use, and would have indicated operation

soon enough to have prevented the extreme degree of degeneration that had occurred. Though there were suppurating sinuses leading down to the kidney, the case has made an excellent recovery. I had also the pleasure of seeing Dr. Frederic operate in the gynæcological theatre.

The Director of the Obstetrical Clinic at Ghent is Professor van Cauwenberghe, and his assistant is Dr. Schoenfeld; there are some 300 deliveries per annum. Adjoining the clinic is the School for Midwives. Professor van Cauwenberghe is also Director of the Frauenklinik, in which Dr. van Wilder is the principal assistant. There is an excellent aseptic operating theatre reserved for cœliotomies, on the same floor as the wards.

Catgut, prepared by Bergmann's (oil of juniper and sublimate) method, is the material used for sutures. Only in some malignant cases is the transverse incision in cœliotomy resorted to.

I was much interested in a case of hour-glass contraction of the stomach, the particulars of which were detailed to me by Dr. Beyer, the pathologist of the clinic. He has just written an interesting and comprehensive essay on this abnormality, in which he reviews its literature from the time of Morgagni, who first described it in 1767, up to the present. (*Essai sur l'Estomac Biloculaire*, par Beyer, Dec., 1904). To the gynæcologist the interest in these cases centres itself particularly in their etiology and the part played by the corset, either directly or indirectly, in their causation. The following is a summary of Dr. Beyer's views. Of the three specimens in the museum, two were taken from patients at the clinic, and a third was sent to him by Professors Firket and Bèco, of Liège.

In the first of Dr. Beyer's cases, the patient, aged 37, died in the hospital, of pulmonary tuberculosis, in November, 1902, and the abnormality appears to have been due to an old ulcer which had been cured. At the time of the *post mortem* the interesting observation was made that the stomach showed a constriction near its

pyloric end which, when the two hands compressed the sides, corresponded exactly to where the left costal border came in contact with the anterior margin of the left hepatic lobe. The stenosis admitted the passage of the little finger. The second case was that of a married woman, aged 38, who entered the clinic at the end of 1903, and who died of malignant anæmia and purpura. Here the pathological conditions do not throw much light on the causation of the contraction, which permitted the passage of the thumb. In the third case, there was no clinical history, neither ulcers nor cicatrisation were present, and there was nothing abnormal in the arterial supply. Here the little finger could be passed through the contraction.

The view that this anatomical anomaly may be congenital has been advanced by different authorities, and an analogy has been drawn between it and the stomach of the ruminants. On the other hand, it has never been met with in the anthropoid apes, and as Dr. Beyer points out, there is a distinct difference between the contraction of the hour-glass stomach and the multiple stomach of the ruminants. However, whether it be due to an arrest of development (Castallani), to the presence of abnormal muscular fasciculi in the stomach wall, or is the consequence of some abnormal disposition of the arteries associated with the congenital anomalies of development, it would seem that the bilocular state is far more frequently acquired than congenital, and that in its etiology gastric ulcer plays the most important part. Such ulceration is sometimes associated with local changes in the peritoneum and the formation of bands and adhesions, after operative procedures (Kummell), traumatisms, or the injection of caustic fluids (Carle, Potain, Schnitzler, Korter). Mayo Robson and Moynihan in England, and v. Eiselsberg, Mickulicz and Kocher, in Germany, have recorded cases in which scirrhus carcinoma has been the causal factor. Guillemot and Langenbeck have recorded other causes, the former syphilis and the latter tubercle. Rassmussen, however, has attri-

buted a great part in the production of the stenosis to the wearing of the corset, the pressure this exerts on the border of the left costal cartilage constricting the stomach against the anterior border of the left lobe of the liver. He considers that the compression produces a circumscribed necrosis, followed by ulceration, and that the consequent cicatrisation contracts the stomach. In Dr. Beyer's first case the situation of the stenosis corresponded to that indicated by Rassmussen, who likewise draws attention to the atrophic groove produced on the liver by the corset. That in many cases the corset cannot be the cause, is shown by the presence of the bilocular stomach in men. While it may by pressure bring about conditions predisposing to the formation of ulcers, it can hardly be capable of producing extreme degrees of stenosis while the stomach is movable in the abdominal cavity. Stenosis has also been found under the left lobe of the liver (v. Hacker). There can be little doubt, from all the observations that have been made, that ulceration is the most frequent primary source of the acquired form of this abnormality.

Dr. Beyer points out that we often find in females a sort of biloculation which does not result from any tetanic contraction of the circular muscular fibres in a limited line, and which is maintained after death, for neither insufflation nor hydraulic pressure causes it to disappear. But it corresponds always to the point of intersection of two lines represented by the free edge of the left hepatic lobe and the costal border. This can be easily demonstrated when the abdominal cavity is opened, if an assistant compresses the two costal borders from without inwards, when the left hepatic lobe is pushed to the left, and the corresponding costal border approaches the middle line, compressing the great curvature and the anterior face of the stomach against the left lobe of the liver. If we now slip the index finger under the liver we feel there a narrow space limited behind by the colon. Here compression is exerted above by the liver, behind by the vertebral column, in front by the costal

border, and below by the gastrophrenic ligament. In this manner biloculation of the stomach is produced. When we find neither ulceration nor cicatrices in such a stomach it must be admitted, Dr. Beyer says, that the corset by itself may bring about the abnormality. Such compression, should there be free peristalsis, has usually no effect, but if there be gastritis and ulceration, peristalsis is impeded and the influence of the compression is then exerted.

In the great majority of cases the bilocular stomach is found in women, and more frequently in advanced life, Dr. Beyer's cases, 37 and 38 years of age, being exceptional. In his opinion, contrary to that of Hirsch, the final result of the stenosis is an atrophic state of the stomach wall and a dilatation of the organ. In this view he is confirmed by the observations of Saake. The dilatation, however, is rarely excessive, and the capacity of the two cavities does not exceed that of the normal stomach. In Dr. Beyer's cases the stomach appeared absolutely healthy, as in those reported by other observers.

Roger Williams, who has more fully studied the pathology of this condition than any other recent writer in this country, has shown that in the majority of cases there are pathological changes, either ulceration, cicatrization, induration, calcification, or perigastric adhesions (Saundby). Dr. Beyer considers that, as otherwise it is folded longitudinally, the smoothness of the mucous surface is pathological, and due to a disappearance of the epithelium and atrophic changes in the muscular, mucous and submucous tissues, while at the same time there is a fibrous invasion and a hyaline degeneration in the muscular fasciculi.

The differentiation of the congenital from the acquired abnormality is difficult. Roger Williams and others attempt to distinguish the two states by such anatomical considerations as the length and narrowness of the constriction, and its distance from the pyloric extremity. The absence of pathological modifications, especially of any thickening at the site of the stenosis, they consider is characteristic of

the congenital form. Dr. Beyer regards the pathological changes which are above noticed, as characteristic of the acquired state.

With regard to symptomatology : the symptoms which follow from various degrees and stages of ulceration of the stomach or from acquired biloculation are so closely allied, that it is hardly possible to rely on any such as will enable us to distinguish clinically between the two. The congenital hour-glass stomach is discovered on the *post-mortem* table, and must be most difficult to diagnose during life. Insufflation of the stomach, with a gaseous mixture, the common method of distending it, may help, as we may find the usual evidence of dilatation, and the outline of a dilated stomach may be present with the clinical symptoms. If, on the contrary, the cardiac pouch is comparatively small, this fact would be in favour of the presence of biloculation ; still, as Mathieu has shown, the pyloric pouch may be hidden under the right lobe of the liver, or, owing to compression or torsion, the constriction may be so great that only the cardiac pouch is dilated. Wölfler suggests two diagnostic signs given by lavage of the stomach ; that the first part of the water that returns is clear and the second is discoloured or dirty, while when the lavage has been finished, the patient vomits the alimentary contents unmixed with bile. Again, when the stomach is washed out with a given quantity of fluid, only a portion returns, proving that some of the liquid has been retained by the stenosis in the pyloric pouch, though, as Ewald notices, this phenomena may be due to a weakness of the pylorus. In a case of Hochenegg's the patient vomited twice ; the first ejection contained food hardly altered, the second, which was often an hour after the first, was composed of altered matters, which were bitter and acid. A peculiar bruit heard with the stethoscope, and indicating the passage of air or liquid from one cavity into the other, is said by some authors to afford a means of diagnosis, while others profess to feel this passage by placing the hand at the level of the stenosis.

Ewald introduces an empty balloon, the size of an orange, into the stomach. Should the latter be an hour-glass one, the balloon after inflation cannot be detected at the pyloric side. On inflating the balloon it is found that as a rule it is on a level with the left costal border. Also upon the application of the gastrodiaphanoscope, should a bilocular stomach exist, the transparent portion is at the left of the umbilicus, or if the stomach be inflated with air, the pyloric portion is found projecting to the right. Such methods of examination, however, are not without danger, and tend to provoke hæmorrhages.

Once the constriction is present, the only proper treatment is operative, and Beyer divides the different procedures that have been practised into two classes :—

A. (1) Resection of the cicatrix; the results of which have not been favourable. (2) Digital dilatation of the stenosis as performed by Loreta, which he says should be completely abandoned. (According to Mayo Robson, in 78 cases there has been a mortality of 39·7 per cent.) (3) Gastroplasty, in which the stenosis is incised parallel to its axis, and sutured so as to bring back to back the two ends of the incision. The results have not been favourable.

B. Under the second category he includes gastro-anastomosis and gastro-enterostomy, which he says is the operation of selection.

I have here given only the outlines of Dr. Beyer's communication, which is worthy of perusal in its entirety.

According to the recent statistics of Mayo Robson, of twenty-three cases operated upon, four were malignant. The results were more favourable than any which have hitherto been published, as of the eleven cases operated upon by gastroplasty alone, all recovered, as did the six patients on whom posterior gastro-enterostomy was performed. Of the four malignant cases, three are reported as having recovered, a partial gastrectomy having been performed in two.

Bonn.

All who have passed down the Rhine know the fine building which stands alone, overlooking the river on its right bank at Bonn. It is the State building of the University Frauenklinik, and is a detached portion of the Krankenhaus, with its various departments. It was founded in 1872, and there have been but two directors since. The first was Professor G. v. Veit, the distinguished obstetrician and gynæcologist, who died in 1903. He was succeeded by its present head, Professor Fritsch, who has been connected



FIG. 1.

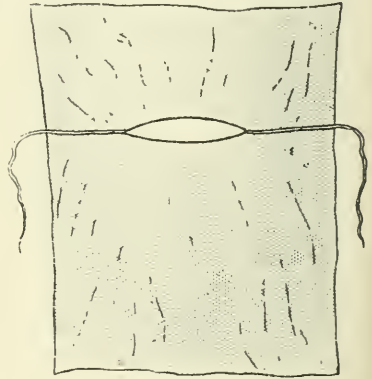


FIG. 2.

with the clinic for ten years. It contains eighty beds, forty of which are obstetrical and forty are gynæcological. The staff consists of the Oberarzt, Dr. Reifferscheid; Dr. Eversmann, Dr. Michel, and Dr. Zurhelle, assistants; Dr. Welsch, a voluntary assistant, and Professor Schroeder, pathologist. I cannot too warmly acknowledge the extreme courtesy, kindness and attention which I received during my visit, and I am especially indebted to Professor Schroeder and Dr. Zurhelle, the former for the time he spent in going over the pathological specimens in the museum with me and the latter for affording me every opportunity of seeing

the working of the clinic, and giving me all the information that I required with regard to its methods.

Professor Fritsch operates at 8 a.m. The aseptic details are very perfect. Sublimate and alcohol are the principal antiseptics used. About a quarter of an hour is consumed

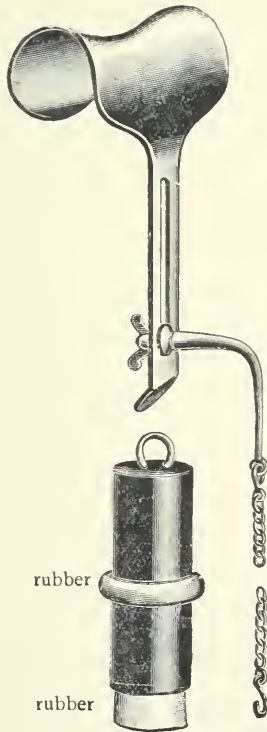


FIG. 3.—AUTOMATIC SUPRAPUBIC RETRACTOR (with weight, 7 lb.).
(Prof. Fritsch's.)

in the preparation of the hands, all the washing being done under running water. Muslin masks are used, which cover the entire head, leaving only an aperture for the eyes. These masks (figs. 1 and 2) I now use altogether and have found them quite comfortable, causing no inconvenience.

They completely prevent any danger of infection from saliva. They are taken straight from the steriliser and adjusted after the sterilisation of the hands. The gut which is almost altogether used in the clinic is iodised catgut, but ammonium sulphuric gut is occasionally employed. Chloroform is the anæsthetic used, and it is given with the large mask. The sterilisation of the vagina is completed in the theatre. The operating table is one devised by Professor Fritsch himself. It is readily raised or lowered into the Trendelenburg position by the anæsthetist, who works the reversible screw in front of him, which also serves to adjust its height. In certain operations, such as ventro-fixation or suspension in oöphorectomy and small myomata, the transverse incision is the one adopted, but this is not the Kustner-Rapin incision carried through the aponeurosis of the abdominal muscle inside the limit of the pubic hair, but the higher one, on a level with the iliac spine, as performed by Pfannenstiel. An ample view of the pelvic cavity is obtained, the subsequent bond of union is strong, the cosmetic effect is good, and the possibility of hernia diminished.

In the abdominal toilet gut is used for the peritoneum and also for the muscle; the fascia is carefully united by interrupted sutures of celloidin-zwirn and catgut alternately, the skin being closed with silkworm gut. When the wound is closed *vioform* is dusted over it, and it is covered with some *vioform* and ordinary sterilised gauze. Then, with a brush, a plaster of lead and zinc is laid pretty thickly over the edges of the gauze. This is covered with another layer of gauze and plaster, and the entire dressing is held in place by an excellent form of adhesive plaster made up in rolls, and perforated so as to avoid the retention of any moisture. I now dress cœliotomy wounds myself as follows: *Vioform* is dusted on the incision; over this two layers of iodoform or *vioform* gauze are placed, then some plain sterilised gauze, the edges of which are secured all round by broad strips of colætin (zinc and lead plaster) the whole being

secured and covered by the perforated plaster I have mentioned. No other covering is required. Vioform (obtained from Perzel u. Shultz, Hamburg) is iodichloroxy-chinosol. It is more easily distributed on wounds than iodoform, is sterilisable, and is odourless.

A few points that I noticed in the operations at the clinic are worth noting. Professor Fritsch operates frequently by morcellation, and I saw him remove some intra-uterine myomata of considerable size by this method. In some cases the cervix is divided bilaterally. In hysterectomy the suprapubic retractor (p. 395), of a shape similar to that used by Doyen, is fixed by a weight, which is readily adapted and out of the way. The supravaginal operation is that most frequently resorted to. Catgut is used for ligation, and to cover the pedicle. For carcinoma the operation performed is almost always vaginal panhysterectomy, and only rarely the operations of Wertheim and Schuchardt.

In performing perineorrhaphy, Professor Fritsch makes a deep transverse incision in front of the anus, parallel to the posterior commissure, carrying the incision as high as possible, from 7 to 8 centimetres behind the vagina. The result is a funnel-shaped wound as deep as the finger. The sides of the wound are then joined by deep catgut sutures, which pass from side to side, in sagittal form, reaching the tuberosities.

The Alexander-Adams operation is a favourite one with Professor Fritsch, and is the procedure adopted in the majority of cases to rectify backward displacement, and also, as an accessory step, in the operations for prolapse and procidentia. The method pursued is almost identical with Alexander's original method. The canal is rarely opened up to the internal ring; the ligament is drawn well forwards and anchored to the sides of the canal and the aponeurosis. Dr. Reifferscheid has invented an automatic retractor for use in the Alexander-Adams operation, so as to enable the operator to dispense with an assistant. Fritsch has availed himself of Pincus' treatment (atmocausis) in menorrhagia,

and in hæmorrhagic endometritis, and has pronounced this method to be "safe, painless, and effective." In operating, whether in passing ligatures or suturing, he avails himself less of the use of a needle holder than any operator I have ever seen; and there is a peculiar deftness in the facility with which his fingers work. His aphorism with regard to early sepsis after cœliotomy is widely quoted, and the conditions which sometimes arise on the second day have been faithfully described by him, the principal of these being tympanites, dry tongue, and rapid pulse, due frequently to a too great interference with the physiological

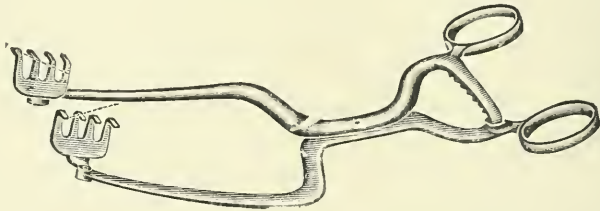


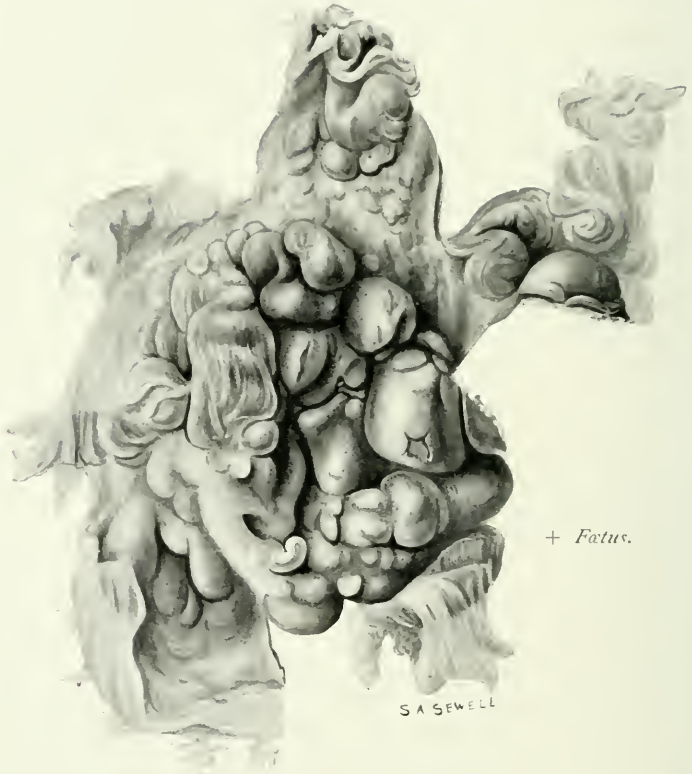
FIG. 4.—REIFFERSCHIED'S RETRACTOR.

functions of the peritoneum, so that the woman "does not die because she is septic, but is septic because she is dying."

In the obstetric department I found that, speaking generally, the treatment of eclampsia consisted in the early emptying of the uterus when possible, keeping the patient in a dark room, packing, the repeated use of the hot bath, the administration of morphia and clysters of chloral hydrate (50 grains), the diet being principally milk. In septic peritonitis hydrotherapeutic measures, such as ice and sublimate packing, are resorted to, and port wine is given freely. Professor Fritsch is emphatic about the necessity of examination of the uterus one week after labour, so as to ascertain its position and guard against displacement.

Enquiring as to the experience in the clinic of the use of Bossi's dilator, the results were not favourable. Dr.

PLATE I.



Subchorionic tuberos hæmatoma.

(Page 399)

(Preparation in the Frauenklinik at Bonn.—Professor Schroeder.)

Bischoff, the Assistant at the clinic in 1902, published the results of five cases (*Centralb. f. Gyn.*, 1902, No. 47), in all of which there were lacerations from its use. Dr. Zurhelle, in a recent case, had a successful result, but there were also slight lacerations treated by immediate suture.

Description of Specimen, Plate I.

By the kind permission of Professor Fritsch, I brought one most interesting specimen from the museum to show at the British Gynæcological Society.¹ It was one of *tuberous sub-chorionic hæmatoma of the decidua*, and the specimen was reported on by Professor Schroeder.² The patient's age was 31 years; she was a tripara and the catamenia had been completely absent. She aborted in the seventh month. Hæmorrhage occurred and the mole was spontaneously expelled. The specimen is not complete, as portions of the membranes on the reflexa side are lost. The very small ovisac measured 6 by 7 cm. The amniotic fluid was not diminished in quantity. On the outer surface of the sac abundant decidual tissue was still adherent. The upper pole of the "chorion læve" was free, the villi there being scanty, whereas underneath they were more abundant, like portions of decidua. The blood effusions are seen in patches on the greyish-white maternal surface. The special feature of the ovum were the numerous protuberances that arched forward on the foetal side of the membranes, especially on its basal surface; they were less numerous on the inside of the "reflexa wall," and altogether absent on the upper portion of the "chorion læve." The protuberances were of a brown and bluish-red colour. They varied in size from a millet seed to a cherry; many had a broad base, some appeared pedunculated and were rather flaccid. On the side of the serotina they were so numerous

¹ It was shown at the meeting of the Society on November 10, 1904.

² *Sonderabdruck aus den Sitzungsberichten der Niederrhein. Ges. f. Natur. Heilkunde.* Bonn, March 14, 1904.

that their sides were faceted from pressure. On section their hæmatomatous character was apparent. Over some the torn amnion floated; the membranes were plaited about several, while others were enveloped by the amnion, and the chorion adhered closely to their contour. The foetus (plate 1) was $5\frac{1}{2}$ mm. long and the buds of the extremities were barely visible. Microscopically in such hæmatomata the amniotic epithelium is generally well preserved. The cilia are necrotic. No small vessels or remains of such are visible. There is no proliferation of the epithelium. The intervillous spaces are thrombosed. The decidua is also necrotic from pressure caused by effusion.

In this group of molar cases the periods cease, while the subjective and objective signs of pregnancy go on until the uterus reaches the size of the fist, when the symptoms of pregnancy are arrested. If there be any hæmorrhage it is but slight; after some months, possibly at the full term of pregnancy or later, the contents of the uterus are expelled spontaneously. The foetus remains small, varying in size from some millimetres to that of two or three months' development. Hæmatomata push the chorion and amnion inwards in the region of the basal layer and protrude into the amniotic cavity. They are sometimes polypoid or villous in shape. Breus held that though the chorionic circulation ceased at the death of the foetus, the membranes continued to grow, and that at the same time they became convoluted from their disproportionate size to the uterus, the enlargement of which ceased with the death of the foetus. Where the membranes are not fixed to the decidua by the chorionic villi they bulge into the amniotic cavity, either as folds or diverticula, and secondary bleeding converts them into hæmatomata.

Contrary to this opinion of Breus, or that of Neumann, who regards the tuberous processes as the *result* of subchorionic hæmorrhage, Professor Schroeder inclines to the view advocated by Davidsohn, that this form of mole is due to hydramnios, and (taking the ground that there is a

PLATE II.



Cystic degeneration in ovaries of stillborn child (Schroeder).
(Page 401)

disproportion between the size of the embryo and that of the ovisac in hydramnios, and that the carneous mole is an early hydramniotic ovum in which the liquor amnii is slowly absorbed, while concurrent hæmorrhage takes place into the ovum), regards such disproportion as the cause of the projection of the foetal membranes into the amniotic cavity. The hydramnios, which results from the blocking from the outflow from the placental sinuses, leads to increased blood pressure, and the latter to increased secretion of liquor amnii. Later, there is stasis in the placental sinuses, and as a consequence subchorionic hæmorrhage, while, later still, the liquor amnii is absorbed through thrombosis of the placental sinuses.

I also brought back some sections of ovaries made by Professor Schroeder, showing cystic degeneration in a still-born foetus. The degeneration occurred in the Graafian follicles; the stroma was studded with inflammatory corpuscles (plate 2).¹

Dr. Cuthbert Lockyer, who has examined these sections microscopically, writes to me that the features which strike him as most characteristic are: (1) The extensive cystic change; (2) the extreme vascularity of the organ. The cystic change has resulted from distension of Graafian follicles. Many of the cystic spaces are lined by epithelium derived from the stratum granulosum. Other cysts show no such differential lining; it (the latter) has either disappeared or has never been formed. Degenerative ova can be seen in a few of the cystic spaces, whilst in the cortical stroma there are numbers of large discrete uninuclear cells, presumably primordial ova, lying free and not enclosed in follicles. The swollen connective tissue cells around the cysts also form a very notable feature.

Brussels.

At Brussels I visited the hospital of St. Anne, which is as complete and perfect an institution of its kind as I have ever

¹ Shown at the Gynæcological Society on November 10, 1904.

been in. There I had the pleasure of watching Professor Jacobs operate in his beautifully fitted theatre, which one must see in order to be able to appreciate it. The most novel feature of his technique consisted of the closure of the skin in the abdominal toilet, by means of Dr. Michel's suture instrument. Professor Jacobs uses the automatic form (fig. 5) of the appliance, though the smaller and cheaper variety is the one now more generally used abroad (fig. 6) (Colin—

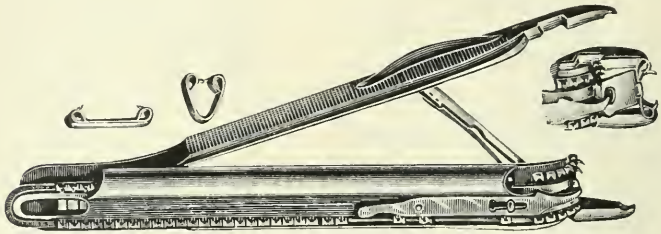


FIG. 5.

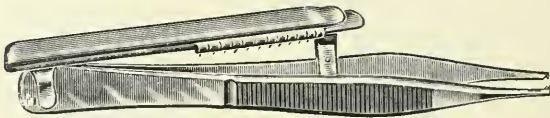


FIG. 6.

Paris). This holds the small clamps, which are automatically released over the line of incision, and by pressure of the forceps secures the adaptation of the edges. The wound is thus rapidly closed, the clamps are removed at the end of five days. I saw this done, and also the completely healed wounds which had been treated by this method. They were most satisfactory. I am now using it myself.

I discussed with Professor Jacobs the important question of the results from operative interference in cancer of the uterus, including those cases in which ablation of all the peri-uterine structures was carried out, as well as excision of

a portion of the vagina. In June, 1904, he published in the *Progrès Médicale Belge*, his results up to that date. These results are not encouraging. The total number of such operations amounted to 95, and the immediate mortality was 6.3 per cent. Of six patients, it was not possible subsequently to obtain the history; among the remaining 89 recurrence took place immediately in 5; during the first year, in 43; in 20 during the second year; in 4 during the third; in 2 during the fourth; and in 2, in the fifth. There were only six cases exempt from recurrence at the end of six years. On the other hand, of 82 cases operated on by vaginal hysterectomy, 81 survived the operation. Of these, the history of 11 could not be traced, and of the 70 remaining cases there were 49 recurrences in the first year, 9 in the second, 11 in the third, and 1 in the fourth. No case lived more than four and a half years.

With regard to glandular involvement, the principal consideration is infection of the parametrium. The ganglia were infected in 51 per cent., free from infection in 20 per cent., and the seat of secondary infection in 28 per cent. To 1904, in 7 cases in which there had been no recurrence, there was infection of the ganglia in 4 cases. Of 76 recurrences, 5 took place immediately after operation, though the whole pelvic ganglionic chain had been removed with the subjacent peritoneum, and the pelvic cellular tissue, as far as the intestine, the bladder, and the ureters. These five operations could not, however, be said to be complete. He implanted a ureter in one case into the sigmoid, in another, into the bladder, and in 3 cases, he ligatured the left iliac veins. In 43 cases which recurred in the course of the first year, he had removed the lymphatics with the large ganglia twenty-one times, and on four occasions one or two large ganglia at the side of the uterus, below the portio vaginalis. Among these 76 cases he found lymphatic ganglia in 45. The recurrence in 47 cases began in the vaginal cicatrix; twenty-nine times it was in the pelvis, leaving the vaginal cicatrix absolutely intact. In

4 or 5 cases he performed a secondary laparotomy. There were generally intestinal adhesions at the level of the enlarged ganglia or the bladder. The base of the vagina was free from adhesions. In one case he resected 17 cm. of the small intestine, at the same time ablating large masses of underlying glands. When the recurrence was in the pelvis it was generally in the parametrium, with rapid involvement of the intestine. Intestinal and mesenteric metastases were rare. Professor Jacobs thinks that the recurrences should not be in any way attributed to cancerous grafting in the course of an operation, but rather to numerous deposits of cancer at the outset of the disease, multiple localisations of the same cancerous infection, to retrograde metastases through the lymphatics, caused by obstruction, or, a more simple explanation, to the continued evolution of growths not completely removed. He does not believe that the contact of the tissues with the cancerous elements causes any grafting of the latter on the former during an operation, whether such contact be short or long, and in support of this view, instances the exceptional involvement of the vaginal surface in cancer of the neck of the uterus, and also the rarity of transmission from individual to individual, even from coitus, in cases of uterine cancer.

He attaches great importance to thorough disinfection of the vagina and the portio before operation, which he says should be carried out by the surgeon himself a few days previously. In operating he adopts the median incision and the Trendelenburg position. Having freed the uterus and adnexa from all their attachments as far as the vaginal *cul de sac*, he proceeds with a wide dissection of the pelvic structures freeing the ureters and bladder as far as the sacro-iliac articulation at either side. The hand is used in manipulating the uterus so as to avoid lacerating the uterine tissues. After the ablation of the infected parts he closes the pelvic floor thus: He unites the vaginal walls at either side with a few interrupted sutures, leaving the middle of the wound open for subse-

quent subperitoneal drainage. Thus he drains separately each broad ligament if necessary. The peritoneum is completely closed by a suture. He does not drain from the abdominal cavity. He does not consider that operation is advisable in cases in which the ureters have to be cut and implanted in the bladder and bowel, or in which the infection extends to the utero-sacral folds, the rectum and the pelvic floor.

REVIEWS.

THE PRINCIPLES AND PRACTICE OF GYNÆCOLOGY FOR STUDENTS AND PRACTITIONERS. By E. C. DUDLEY, A.M., M.D., Professor of Gynæcology, North-western University Medical School ; Gynæcologist to St. Luke's and Wesley Hospitals, Chicago, &c., &c. Fourth Edition, revised and enlarged ; with 419 illustrations in colours and monochrome, of which 18 are full-page plates. Royal 8vo, pp. xiii. and 770. London : Henry Kimpton, 1905. Cloth. Price 25s.

The third edition of Professor Dudley's book on gynæcology was published in 1903, and reviewed in the May number of this Journal (vol. xix. p. 86.) In the present edition an attempt has been made to include the recent advances in our knowledge, and in doing this many chapters have been rearranged and altered. The sections relating to General Diagnosis, Local Treatment, Major Operations, Drainage, Urethritis, Cystitis, Ovarian Tumours, Embryology, Malformations and the Treatment of Salpingitis, Ovaritis and Pelvic Peritonitis have been subjected to special revision and to a great extent rewritten, with practical additions.

A special feature of this edition over the previous edition is that over three hundred new illustrations have been introduced to the exclusion of all borrowed reproductions, and that all major and minor manipulations and operations have been pictured so as to show the several steps of each procedure as they take place. A series of drawings is devoted to each operation ; for example, twelve drawings have been inserted to explain the steps in hystero-myomec-

tomy, and thirty-two to illustrate perineal lacerations and the steps in perineorrhaphy. Nearly all the illustrations are good, though some are redundant and seem to overlap each other in what they are intended to show. The drawings showing the embryology of the generative organs are good, and, with the accompanying tables setting forth the homologues in the two sexes, make that chapter intelligible.

In discussing the surgical treatment of salpingitis, Professor Dudley rightly lays down that the uterus does not necessarily become a pernicious, continuous, disabling and dangerous source of infection after removal of the appendages: he thus disposes of the fiction that immediate total ablation is necessary, or desirable, in all cases. He advises, in some cases, vaginal incision with drainage: in others, removal of the tubes, including those parts which penetrate the cornua of the uterus, and again in others, where the pelvic organs are matted together in one infected mass, vaginal hysterectomy.

In cancer of the uterus, he holds that abdominal hysterectomy and removal of the infected peri-uterine and lumbar glands, is not advisable because the complete radical operation entails an increased and dangerous traumatism, in what must be a long and tedious operation, without giving a reasonable guarantee against further recurrence.

The text is clear and lucid and, although many things have been left unsaid, the work is concise, and the surgical technique, aided by so many admirable and explanatory pictures, is readily understood. The work, may be recommended to students and practitioners alike, especially as a treatise in operative procedure, and as such reflects great credit on a surgeon who can be little short of brilliant in his art.

THE SURGICAL TREATMENT OF BRIGHT'S DISEASE. BY
GEORGE M. EDEBOHLS, A.M., M.D., LL.D., Professor
of the Diseases of Women in New York Post-Graduate
Medical School and Hospital; Consulting Surgeon

St. Francis' Hospital, Consulting Gynæcologist to St. Johns' Riverside Hospital, Yonkers, and to Nyack Hospital, New York, &c., &c. Large 8vo, 2 plates, pp. vi. and 339. New York: Frank F. Lisiecki, 1904.

In this book the author has not attempted to give a complete and systematic treatise on the surgical treatment of Bright's disease, but only to demonstrate such facts, especially as regards results, as have been obtained from his own experience. Until quite recently, chronic nephritis has been considered an incurable disease, and any new form of treatment which held out the hope of cure for this common and fatal malady would be readily welcomed by the medical profession; nevertheless, Dr. Edebohls' suggestion that chronic Bright's disease should be treated by surgical methods, came rather as a shock to medical practitioners, as, heretofore, it had been universally taught that no surgical operation of any kind should be undertaken in any part of the body of a patient suffering from chronic nephritis, unless it was of vital necessity. Dr. Edebohls shows that this opinion is wrong, that surgery is of the greatest benefit to the patient, and may, in certain cases, be the only means of preventing the disease or its complications proving fatal.

The first part of the work consists of a reproduction, in chronological order, of various papers, on the surgical treatment of chronic nephritis and allied conditions, written between the years 1899 and 1904. The remainder of the volume contains the histories of the seventy-two patients upon whom he has operated, and an analysis of these cases and their results.

It follows, therefore, that much of the subject-matter in the early part of the book is repeated in the various papers, with such additions and alterations as have been suggested by increased knowledge and experience. Practically speaking all the opinions and theories of the author, and the details of the treatment are to be found in the article entitled "The Surgery of Nephritis," published in May, 1904.

After describing how he came to adopt operative treatment in 1898, Dr. Edebohls advocates one method of operation only, namely, decapsulation of the kidney. Both kidneys should be dealt with at the same sitting, as the chief danger in the operation lies in the narcosis, and the patient should not be unnecessarily exposed to the risk of a second anæsthesia. The operation should not be prolonged for more than an hour, but in the hands of anyone expert in renal surgery, it is unlikely that more time than this would be required. The anæsthetic used should be that which the surgeon generally employs, and no special form of administration is essential. After the kidney has been exposed by the usual lumbar incision and separated from its fatty capsule, it is, if possible, delivered, and the true capsule is stripped off and removed as far as the renal pelvis. Care must be taken not to tear away portions of kidney substance, as the capsule is likely to be adherent in places. The kidney is then dropped back into its pouch and the wound sutured. The rationale of this procedure is that by removal of the impervious capsule proper, new vascular connections are created between the kidney and the surrounding tissues, the circulation in the organ is thereby greatly improved and the patient benefited in a manner similar to that by which the symptoms due to cirrhosis of the liver are relieved by modern methods of operative treatment. It must clearly be understood that renal decapsulation is not undertaken with any idea of relieving tension, as operation shows that in chronic nephritis the capsule does not even fit the kidney tightly; in fact, in some cases appears to be looser than normal.

Although the formation of new vessels leading to the kidney accounts for the ultimate good effects after operation, the immediate benefit cannot be attributed to this cause, and Dr. Edebohls considers that this is brought about by the necessary manipulations of the kidney during the decapsulation. This can readily be believed in view of the good results which are so often seen after exploring an apparently normal kidney for renal symptoms.

After the operation of renal decapsulation, a new capsule is invariably formed, but this is always softer than before, and the danger of subsequent contraction need not be considered. At the present time, the author advises his operation in all forms of chronic nephritis, and the only contra-indications are the presence of some condition which absolutely prohibits any operation, advanced vascular and cardiac affections (*i.e.*, dilatation) and retinitis albuminurica.

Before any new operation for such a disease as chronic nephritis can be accepted, it must be shown, in the first place, that cure or improvement follows the operation with practical uniformity; secondly, that a cure, once obtained, is, as a rule, lasting; and thirdly, that improvement obtained by operation in character, in the great majority of cases is steadily progressive. These conditions the analysis of the cases and their results show to have been fulfilled, and it is with much pleasure that we offer our congratulations to Dr. Edebohls on the success which he has achieved. Anyone who has attempted a similar feat will appreciate the difficulties of producing such an eminently interesting and instructive work as the one under consideration. The histories of the seventy-two cases are most thoroughly and carefully given and all the results brought up to date; two cases of puerperal eclampsia of renal origin are included in which decapsulation of the kidneys, without any doubt, absolutely saved the patients' lives. The chapters devoted to discussing the question of priority in regard to decapsulation might have been omitted with advantage.

The book contains two plates illustrating the vascularisation of the new capsule, and concludes with an excellent bibliography and an index.

The surgical treatment of Bright's disease is too recent to offer any definite criterion as to its advisability as a routine practice, but the results certainly show that it is a matter requiring the most careful attention. In the first place, considering the fatal nature of the disease and the fact that

many of the patients operated upon were practically moribund at the time of operation, the mortality is small ; again, although many of the patients who survived are not classed as cures, yet so much improvement in their general health has occurred that they are quite satisfied with the result of the operation ; and, lastly—and this by itself would be sufficient to justify the operation—a fair proportion have been absolutely cured. Dr. Edebohls has only given us the results of his cases up to the end of the year 1903, and he does not consider that sufficient time has elapsed to publish those of his operations in 1904. We shall look forward, therefore, with much interest and some impatience to the publication of the later series of cases.

THE SURGERY OF THE DISEASES OF THE APPENDIX VERMIFORMIS AND THEIR COMPLICATIONS. By WILLIAM HENRY BATTLE, F.R.C.S.Eng., Surgeon to St. Thomas's Hospital, formerly Surgeon to the Royal Free Hospital, Hunterian Professor of Surgery at the Royal College of Surgeons of England, &c. ; and EDRED M. CORNER, M.B., B.C.Cantab., F.R.C.S.Eng., Surgeon-in-Charge of Out-patients to St. Thomas's Hospital and Assistant Surgeon to the Hospital for Sick Children, Great Ormond Street, Erasmus Wilson Lecturer at the Royal College of Surgeons of England, &c. London : Archibald Constable and Co., 1904. Demy 8vo, pp. 208. Price 7s. 6d. net.

A new book on appendicitis, considering the wealth of literature on the subject which exists and ever increases, may at first seem superfluous, but it is the very amount of such literature that gives the present volume its value. So extensive and so scattered are the writings on appendicitis, that it is impossible for anyone to study the whole subject unless he has much leisure and access to a large library.

This volume is the outcome of much work, both practical and literary, on the part of the authors. The

accepted ideas, views on the pathology, diagnosis and treatment of the diseases of the appendix are presented to the reader, not only in a concise form, but from the point of view of practical surgeons before whom a constant stream of illustrative cases is ever passing. The first chapter, on the history of the disease, the anatomy, physiology, and development of the appendix supports the view that the appendix is a physiologically functional, and not merely a useless vestigial, structure. When to operate? is a question often asked, and one on which there is considerable diversity of opinion. While not advocating immediate operation in all acute cases, the authors urge that the decision whether to operate or not, should be made within the first forty-eight hours. If this cannot be done they consider that the doubt should be settled by operation, as cases operated upon early nearly always do well, whereas if the operation be done after the third day the surgeon will generally regret that he did not interfere earlier.

Discussing the methods of incision, the authors recommend an incision through the anterior sheath of the right rectus muscle; the muscle is then retracted towards the middle line and the posterior layer of the sheath divided. They consider that this method gives the best exposure of the parts, the wound can be enlarged vertically as far as required, and at the end of the operation the rectus muscle covers up the whole of the incision in the posterior layer of the sheath and peritoneum. The risk of hernia by this method seems to be reduced to a minimum, as they have had only one case, which occurred after extensive suppuration in the wound. They describe a new method of dealing with the stump; by means of a special clamp the inner coats are divided, the peritoneal covering remains intact and is ligatured, and the tissue left to be sewn into the cæcum is scarcely larger than that left after tying an artery. They consider this to be the quickest, neatest, and most aseptic method of removing the appendix.

The difficulty of making a diagnosis in acute abdominal

conditions is one with which every surgeon is frequently confronted. An excellent chapter on the differential diagnosis of such conditions will be found in this work. From the examination of a large number of consecutive cases of acute abdominal diseases, the authors found that in 37 per cent. the cause of the inflammation was appendicitis and its complications. The rarer forms of appendicular disease and morbid growths and the various complications receive notice. The bearing of appendicitis on life assurance is fully considered.

We have read the book with great pleasure, and can recommend it as an excellent and practical treatise, presenting the subject to the reader in all its bearings in a most concise and interesting manner.

We have not before met with, nor can we find any satisfactory authority for the word "exviscerate" used in this work, instead of the usual and more euphonious eviscerate.

CLEFT-PALATE AND HARE-LIP : THE EARLIER OPERATION ON THE PALATE. By EDMUND OWEN, M.B., F.R.C.S., Consulting Surgeon, St. Mary's Hospital; Hospital for Children, Great Ormond Street, &c. London: Baillière, Tindall and Cox, 1904. Cr. 8vo, pp. 111, with 39 illustrations. Medical Monograph Series. 2s. 6d. net.

This little book will be received with much interest, as it embodies the experience of a surgeon well qualified to speak with authority on the subject.

The method of dealing with cleft palate which he advocates, differs considerably from that generally taught and described in the text-books, and is a distinct advance in the treatment of this deformity. He strongly recommends early operation, the most favourable time being, in his opinion, between the ages of two weeks and three months, as he finds that infants even at this early age can bear the shock, while if cases are left until later ages, the palatal muscles having no fixed attachment fail to develop, and the cha-

racteristic defect in speech can never then be remedied. In the method he advocates, that of Dr. Brophy, of Chicago, the essential feature is that the maxillary processes are brought together and sutured. This can usually be done at an early age, but later on when the maxillæ have become more ossified is impracticable. A chapter is devoted to the development of the palate and lips. Very full and detailed descriptions of the operation, the material, the instruments, and the assistants, add considerably to the practical value of this very complete monograph.

CLINICAL AND PATHOLOGICAL OBSERVATIONS ON ACUTE ABDOMINAL DISEASES DUE TO CONDITIONS OF THE ALIMENTARY TRACT AND THE UNIFORMITY OF THEIR ORIGIN. Being the Erasmus Wilson Lectures, 1904. By EDRED M. CORNER, M.A., M.B.Cantab., F.R.C.S., Surgeon to outpatients St. Thomas' Hospital, Assistant Surgeon to the Hospital for Sick Children, Great Ormond Street, &c., &c. Demy 8vo, pp. 98. London: A. Constable and Co., 1904. 3s. 6d. net.

The aim of these lectures is to point out the identity of the pathological changes in all acute ulcerative, perforative, and gangrenous processes of the alimentary tract, and to show that such processes are due to the same pathological causes as in other parts of the body, modified only by the special vascular and bacteriological relations of the parts concerned.

The book is divided into short sections, each dealing with instances of these processes as they have been observed in different regions. Clinical cases are cited and their pathology discussed in the light of subsequent operative or post mortem investigation.

The author points out that gangrenous and perforative conditions depend upon bacterial infection rather than on mechanical causes; numerous illustrative cases are quoted, and many others will occur to all who have to deal with acute abdominal conditions. In some cases bowel, which

after perhaps two or three days strangulation has appeared almost beyond hope, has been returned into the abdomen and the patient has made a good recovery. In others, though the strangulation has been of short duration, and the condition of the bowel has not given much anxiety, the patient has died and extensive gangrene has been discovered post mortem. The same diverse results have followed thrombosis of mesenteric vessels: one case with extensive thrombosis recovers, another, with much less, proves fatal. Some perforated ulcers are stitched up and heal without a bad symptom, others break down and at the autopsy the stitches are found torn out and the surrounding bowel gangrenous. These varying results are due, the author maintains, to the fact that, in one class of case, the organisms are of less virulent type and do not tend to spread beyond the damaged area, in the other, virulent cocci prevail and the process is an acute infective necrosis. There is, he shows, a free anastomosis between the visceral vessels, and he cites cases and experiments to show how recovery may take place after extensive areas of bowel have been cut off from their blood supply provided that the parts remain aseptic, while thrombosis of a comparatively small vessel may, in the presence of an acute infection, give rise to extensive necrosis of the bowel. His observations on appendix abscess bring out a point which does not appear to be generally known, that is, the frequency of abscess in acute cases which recover, the abscess discharging itself into the bowel. He shows that all acute cases in which the pain and pyrexia continue for a few days are probably accompanied by suppuration. Such cases are generally classed among the non-suppurative. The frequency of faecal fistula after operation, as in several cases quoted, bears out the truth of this. This able monograph may be heartily recommended, and will be read by all surgeons with both profit and interest.

PRACTICAL MANUAL OF DISEASES OF WOMEN AND UTERINE THERAPEUTICS, FOR STUDENTS AND PRACTITIONERS. By H. MACNAUGHTON-JONES, M.D., M.Ch., &c., &c. Ninth edition. With 637 illustrations and 125 coloured and plain plates; pp. xxxviii., 1044. Demy 8vo. Price 21s. net. London, 1904: Baillière, Tindall and Cox.

The ninth edition of this well-known book appears for the first time in the "University Series" of its publishers. It has been largely re-written and, as the author justly says, has been brought into line with the most recent clinical operative and pathological advances. A hundred additional pages and nearly a hundred more plates make it somewhat bulky, but this inconvenience can be avoided, as it is also published in two smaller volumes. We do not know of any other book by a British gynæcologist so rich in examples and illustrations, and the latter are particularly well executed, and are most elucidative of the text. In the part of the book devoted to the consideration of uterine myomata alone, there are 133 illustrations and 15 plates. The whole book gives evidence of untiring enthusiasm, a comprehensive knowledge of every detail of gynæcological work, not only in this country but the world over, and of sound and mature judgment founded on large personal experience. That it should be looked upon as a text-book for "students," in the ordinary meaning of the word, we are hardly prepared to agree. The ordinary student, for instance, cannot be expected to take a great interest in all the different methods of performing hysterectomy for myoma, in all the details by which one differs from another, and in all the reasons why one method is and should be preferred to another. While such matters are of supreme importance to the gynæcologist, to the student the matters of most importance are that he should be able to diagnose the myoma, and should know when to advise operation and when not to do so.

In the first chapter, "Anatomical and Clinical," a new and important section is devoted to the vermiform appendix,

and this is well; for it should be known that infection of the adnexa is not infrequently due to a diseased appendix, and also that post-operative adhesions may involve the appendix and cause pain and disappointment to the patient. To avoid this, the pedicle should be covered with peritoneum, and the bowels should be moved early after the operation. Early symptoms of appendicitis should not be mistaken for inflammation of the adnexa. Cases bearing on these points are described and illustrated, notably one of a large cystic ovary which had formed for its entire length a firm union with an appendix containing two hard smooth concretions the size of beans.

Dr. Macnaughton-Jones has given up the use of silk ligatures, and for suturing the skin employs a strong white thread of cotton impregnated with celloidin and called celloidinzwirn, which is cheaper than silk, and has the advantage of being capable of sterilisation by heat, after which it is kept in perchloride solution. It may also be used for deep sutures and ligatures. For other sutures and ligatures he uses catgut or Kroenig's cumol gut, which he finds very reliable, and the preparation of which he describes. He sterilises his hands and arms by thorough scrubbing (with nail-brushes that are always kept in an antiseptic solution) and washing under a running tap of lysoform and with Izal soap. They are then scrubbed with 1 in 1,000 sublimate solution and finally held for a few minutes in equal parts of sublimate solution (1 in 1,000) and absolute alcohol. There are two basins for rinsing the hands in during the operation: one of sterilised water, the other of lysoform. Full directions are given for the cleansing of the abdomen and vagina, and rendering the whole operative area and surroundings aseptic. We are glad to see how strongly anyone is condemned who, after the most elaborate antiseptic preparations to secure asepsis, spoils it all by using his pocket handkerchief or twirling his moustache. We have seen such things done, and they must be stopped. We agree with the author that if a patient loses her life from sepsis

that might have been prevented, the surgeon must bear the responsibility.

For uterine displacements requiring operative treatment, a very small proportion, in cases absolutely uncomplicated Dr. Macnaughton-Jones prefers the modified Alexander-Adams operation. In cases complicated by adhesions or adnexal disease, he thinks it is better to perform a cœliotomy and, after dealing conservatively, if possible, with the adhesions and adnexa, utero-suspension, or, if the patient is past the child-bearing age, a ventrofixation.

For prolapse of the uterus and vagina there are many operative procedures, from the late Lawson Tait's simple repair of the perineum, to Christopher Martin's complete extirpation of the uterus and vagina. They all have their due description and due appreciation. We believe that the ideal operation has yet to be devised. At present relief is best afforded by some combination of operations, as for example, in two instructive cases treated by hysterectomy and colporrhaphy, the method of Leopold and Wolff. The author says, "that in chronic inversion of the uterus the older methods of pressure and taxis will be abandoned in favour of reposition by an operative procedure." The excessively low mortality of such operations, the rapidity and completeness of the relief, as compared with that afforded by repositors, certainly lends support to this statement.

The difficulty, first noted by Shaw-Mackenzie, of differentiating between a hæmorrhagic or glandular endometritis and malignant disease is emphasised. The severe hæmorrhage, even if arrested by curetting, returns in a short time with increasing severity and demands, as in the case described, hysterectomy for its cure. Many of these cases are microscopically indistinguishable from cancer.

The portion in this edition devoted to myoma has been very much enlarged and is a complete monograph in itself. It is the outcome of a large personal experience and of a wise judgment of the work of many of the most famous gynæcologists which the author has had the advantage of

seeing. We would draw especial attention to what he says about the complications and degenerations of myoma. These are far more frequent than has generally been thought. The latest investigations show that the mortality arising from these tumours is at least 33·3 per cent. The mortality from hysterectomy may be put at from 2 to 10 per cent.; we think it is much nearer 2 than 10. It must always be remembered that the operating surgeon meets with complications of a most serious nature, such as tubal and ovarian disease, omental and intestinal adhesions, peritonitis and ascites, degeneration and necrosis of the tumour and many others, which help to swell the mortality after hysterectomy. They are due entirely to the erroneous idea still laid down in most text-books, that myomata are generally harmless and should be left alone until they directly and immediately threaten life. In the face of facts, this old teaching should be given up, and it is gratifying to see this put so strongly by the author. We would point out, too, that the men who put forward and exaggerate the mortality rate of hysterectomy as an argument against its performance are the very ones who are responsible for a higher death-rate than is necessary. The delay that they advise is the cause of the lethal complications. We speak plainly, it is high time we did so.

After reviewing the entire subject of treatment in cancer of the uterus, it would seem that from the extreme radical measures with removal of glands, the results are hardly more hopeful than those obtained by a free pan-hysterectomy, with removal of such glands as may be felt, and of as much of the vagina as may be called for.

We wish we could refer more fully to the important chapters on chorion-epithelioma, illustrated by three beautiful coloured plates of Sir Halliday Croom, on tuberculosis of the female genitalia, on diseases of the appendages, and on tubal pregnancy. In the last of these reference is made to the view of Bischoff, His, and Strassmann, that the union of the ovum and spermatozoa takes place in the Fallopian tube. According to this theory each pregnancy begins as

an extra-uterine one, and remains such only from some obstruction or want of propulsion. Professor Taylor has noticed the frequency of an atrophic condition of the tube in tubal pregnancy, and pointed out that any want of development, any contraction, any swelling of the mucous membrane or any failure of muscular power in the tube, increased the tendency towards a tubal instead of a uterine pregnancy. Clarence Webster's case of undoubted ovarian pregnancy is mentioned. There is a very fine plate of an instantaneous photograph of a retro-uterine hæmatocele from rupture of the foetal sac (from Bumm). Several cases are reported, illustrative of the value of conservative operations.

All these chapters, together with those on affections of the vulva, vagina, bladder and urethra, including a fine description of the surgery of the ureter, reach a very high standard. They, like the whole book, are most interesting. We would say that it is a book that every gynaecologist should read, that it is a veritable storehouse of valuable information, anatomical, pathological and clinical, and is most easy to read, since all the valuable points are illustrated by cases in the actual experience of the author. It should have a large circulation.

TABULÆ GYNÆCOLOGICÆ, 26 Mehrfarbige auf Pausleinwand Gedruckte Lithographische Tafeln, mit Kurzem Erläuterndem Text, Herausgegeben von Professor Dr. FRIEDR. SCHAUTA, o. ö. Professor der Geburtshilfe und Gynaekologie an der Wiener Universitaet, und Dr. F. HITSCHMAN, Assistent der I. Universitaets-Frauenklinik (Hofrat Schauta) in Wien. Leipzig und Wien: Franz Deuticke, 1905. Preis in Mappe 120 marks. (Text: Folio 60 pp.)

Six large diagrams, coloured lithographs printed on tracing linen, and in size 24 inches by 20 inches, illustrating gynaecological and obstetrical histology and pathology, have been sent to us as a sample of the complete set, which, as

catalogued, numbers twenty-eight, although on several of the plates two or more pictures are represented. The colours are yellow, black, and different shades of red. The magnification varies in the different plates from the low to the higher powers of the microscope, and a remarkably good effect is produced by holding the plates up to the light, for, by reason of the transparency of the linen, the transmitted light shows up in great clearness every detail; the plates are intended to be used only in this way, either by day or lamp-light. The specimens sent to us, while they are to a certain extent diagrammatic, are faithful to Nature. They comprise: (1) Intervillous circulation of the normal placenta; (2) the transverse sections of the Fallopian tube across the isthmus and ampullary end (both on one plate); (3) the early ovum embedded in the decidua of the uterus; (4) an incomplete tubal abortion (transverse section); (5) a ruptured tubal gestation, showing erosion into the peritoneal cavity, and (6) chorion epithelioma of the vagina. The first five of these are good. The intervillous circulation of the placenta and the sections of the Fallopian tube are especially so. The catalogue shows that the other plates exemplify the normal and the pathological histology of the pregnant and non-pregnant uterus, including follicular and papillary erosion, carcinoma and epithelioma of the cervix, hyperplastic and hypertrophic glandular endometritis, adenocarcinoma and sarcoma of the corpus uteri, as well as inflammation and new growths of the Fallopian tubes and ovaries.

We feel sure that the present publication will have a future, and we can recommend these tables and plates to all professors and lecturers on the subjects with which they deal. They supply a distinct want in the available means of teaching gynæcology, for experience shows that, as an introduction and aid to personal observation, exactness in detail in the pathology of disease can best be imparted to others by pictorial illustrations.

THE PREPARATION AND AFTER-TREATMENT OF SECTION CASES. By W. J. STEWART MCKAY, M.B., M.Ch., B.Sc., Senior Surgeon to the Lewisham Hospital for Women and Children, &c., Sydney, N.S.W. Royal 8vo, pp. xx. and 651, with 113 illustrations. London: Baillière, Tindall and Cox, 1904. Price 15s.

The instructions in regard to the preparation and after-treatment of section cases to be found in text-books are not full enough for the man who has had little experience in abdominal surgery and, remembering his own initial difficulties, Mr. McKay in this book has tried to make things easier for others beginning such work. In so doing he displays not only the results of a large and successful personal experience, but a most comprehensive acquaintance with the recorded work of other surgeons—British, American and Continental. While freely quoting apposite cases he does not omit those of his own failures, from which a lesson is to be learned. He is a sound instructor on asepsis antisepsis and sterilisation, and moreover essentially practical, as appears particularly in his description of the sterilisation and preparation of instruments, ligatures and dressings at the surgeon's home, their packing and transportation, and the other preliminaries for an operation in a private house. For disinfection of the hands, he uses Lockwood's biniodide of mercury method; he considers the introduction of rubber gloves as one of the greatest advances made towards minimising the danger of infection, especially when the surgeon's hands have been exposed to that danger or are cut or abraded, or for military service in the field, and especially for the assistants at an operation. For superficial ligatures he recommends silkworm gut; for buried ones, cumol catgut or silver wire. He has not used a marine sponge for several years. While Olshausen, Zweifel, Howard Kelly and others have led to the abolition of drainage tubes and this abolition may not have affected the results of operation in aseptic clinics, he thinks it would deprive the less skilful of prophylactic measures against

peritonitis they cannot afford to dispense with at present. He insists that the vagina should always be made ready for surgical interference, even when the proposed operation is expected to be entirely abdominal.

The details of treatment in ordinary cases for the first week are fully discussed. Sips of hot water may be given after the first six hours; to relieve pain and secure sleep the author has found morphia, even in very small doses ($\frac{1}{12}$ — $\frac{1}{8}$ gr.), and trional, most satisfactory. Gastric lavage as a means of relieving obstinate vomiting, though mentioned, is we think hardly given the credit it deserves. It is afterwards recommended as an almost indispensable preliminary to anæsthesia if the vomiting has been stercoraceous, and also in connection with post-operative hæmatemesis. An effort is made in all cases to obtain an evacuation of the bowels on the third day.

We would draw particular attention to the admirable chapters on Pulse, Temperature and Respiration, and on the Tongue. To that on Shock, which Mr. McKay characterises as the most important matter in the treatment after abdominal section; and to those on Septic Intoxication, &c., Peritonitis and Obstruction, all very full, and enriched by numerous cases and quotations. Watson Cheyne is cited as saying that many deaths set down to shock are really due to sapræmia, and Mr. McKay says that many cases reported by the earlier ovariologists as "collapse," were no doubt acute septicæmia. After the consideration of the other complications the last chapter is devoted to the repair of ventral hernia.

We have read the book with the keenest interest, and are sure it will be welcomed by all abdominal surgeons, few if any of whom would fail to learn from it. In this we agree with Mr. Christopher Martin, who has seen it through the press, a particularly difficult task, when the manuscript is another's.

PUBLICATIONS RECEIVED.

- FROM F. BAUERMEISTER, GLASGOW ; J. F. BERGMANN, WIESBADEN :
 Belastungslagerung. Grundzuge einer nichoperativen Behandlung chronisch-entzündlicher Frauenkrankheiten. von Dr. LUDWIG PINCUS, Frauenarzt in Danzig, mit 25 Abbildungen. Large 8vo, pp. viii. and 152, 1905. Price 3s. 9d.
- Handbuch der Geburtshilfe. . . In drei Bänden herausgegeben von F. v. WINCKEL in Muenchen. Mit zahlreichen Abbildungen im Text und auf Tafeln, Zweiter Band. I. Teil, pp. x. and 654, price 14s. 9d. ; II. Teil, pp. x. and 798 (655—1452), price 18s. 9d.
- TRANSACTIONS OF THE NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY, 1904, Fasciculi vi. and vii.

Also the following Pamphlets and Reprints :—

- By J. HENRY BARBAI, Instructor in Surgery, University of California :
 Fractures into and about the Elbow-joint.
 Strangulated Femoral Hernia containing Appendix.
 Surgical Treatment of Chronic Dysentery and Uretero-cystostomy.
- By Dr. S. FLATAU, Nuernberg :
 Merkblatt verfasst im Auftrage der Fraenkischen Gesellschaft fuer Geburtshilfe und Frauenheilkunde : Ueber die Gefahren des Unterleibskrebses, ein Mahnwort an die Frauenwelt ; also a flyleaf to all the Midwives, and a circular to all the Medical Practitioners in Franconia : Zur Bekämpfung des Uteruskrebses.
- By EDGAR GARCEAU, M.D., Surgeon to St. Elizabeth's Hospital, Boston :
 La Cystite chronique rebelle, traduit de l'anglais par le Dr. Léon Imbert, de Montpellier, 1904.
 Removal of Calculus in the Ureter by a New Method ; and, Vesical Appearances in Renal Suppuration.
- By Dr. ERNEST HOENNICKE, Physician to the Royal Insane Asylum, Sonnenstein, Saxony :
 Zur Theorie der Osteomalacie. Zugleich ein Beitrag zur Lehre von den Krankheiten der Schilddruese.
- By Sir ARTHUR VERNON MACAN, M.B., &c., Ex-President Royal College of Physicians, Ireland : Accidental Hæmorrhage.
- By E. S. MCKEE, M.D., Cincinnati : The Ethics of Gonorrhœa in the Female.
- By W. P. MANTON, M.D., Detroit, Michigan :
 The Value of Non-Operative Local Treatment on Pelvic Disorders.
- By Dr. FRANZ v. NEUGEBAUER, Director of the Gynæcological Section of the Evangelical Hospital at Warsaw :
 Hydromeningocele sacralis anterior (Sonderabdruck aus *Hegar's Beitræge*, Band ix., Heft 2), with 15 illustrations in the text.
- By Dr. LUDWIG PINCUS, Frauenarzt in Danzig :
 Die Bedeutung der Atmokausis und Zestokausis für die allgemeine Praxis (*Berliner Klinik*, Heft 198, December, 1904).
- By FRANCIS J. QUINLAN, M.D., LL.D. :
 Inaugural Address of the President of the New York County Medical Association, October 17, 1904.
- By CLARENCE EDWARD SKINNER, M.D., LL.D., Newhaven, Connecticut :
 A Large Fibrosarcoma Treated by Roentgen Radiation.
- By J. BLAND SUTTON, F.R.C.S., Surgeon to the Chelsea Hospital for Women, &c., &c. : Essays on Hysterectomy.

SUMMARY OF GYNÆCOLOGY, INCLUDING OBSTETRICS.

MAY, 1904.

ADRENALIN, AND SIMILAR PREPARATIONS OF THE SUPRARENAL GLANDS, IN GYNÆCOLOGY.

PETERS, Dresden (*Der Frauenarzt*, 1904, Nos. 1 and 2), reports most brilliant success from the use of adrenalin in pruritus vulvæ and acute vulvitis. In two most obstinate cases previously treated in vain with all possible drugs, a rapid cure was obtained by the following method: a pad of cotton-wool soaked in a 1:2,000 solution of suprarenin was applied for four minutes, all existing ulcers were touched with caustic, and a dressing of byrolin was applied. At night cotton-wool soaked in a 1:3,000 solution was introduced; moreover, the suprarenin was again applied for a short time twice each day. The improvement was immediate and continued. Peters has tried not only the English adrenalin but renoform (Freund and Redlich) and suprarenin hydrochloricum (Hoechst). As there does not appear to be any difference in their action, he recommends the cheapest preparation, suprarenin (10 cm. of 1 per cent. solution, 1s. 6d.).

PSYCHOSES AND OPERATIVE GYNÆCOLOGY.

FREDERICQ (*Bull. Soc. Belge Gyn. Obst.*, t. xiv., No. 4), in a recent communication to the Belgian Gynæcological and Obstetrical Society, said that while all authors admitted the extreme frequency of affections of the genital organs in women with psychoses, they were by no means likeminded as to the existence of any causal relation between sexual and mental diseases. Baldy denies any such relation, never having met with a case in which the gynæcological trouble could be considered as the direct and sole cause of dementia, and this view is taken by many

others. On the other hand, Schultze, Savage, Hall, &c., have insisted upon the great importance of sexual diseases in the etiology of mental disorders. Others, again, admit the possibility of a causal relation, but consider its presence to be quite exceptional. Loewenfeld classifies the gynæcological disorders of the insane as: (1) Those directly or indirectly causing the psychoses; (2) those associated with other factors in doing so; (3) those independent of the mental state, but due to the same cause; and (4) those resulting from primary nervous disease.

Even those who admit a causal relationship between sexual and mental diseases, hold opposite opinions as to the propriety of operative treatment. Gilliam, for instance, considers that every woman the subject of a psychosis or epilepsy should be castrated. Others have declared that no gynæcological operation should be performed on the insane. Neither of these extreme views should be accepted—no doubt the divergence of opinion is to be sought in the difference in the results obtained by different operators.

In 1887 Willers published an important report on the results of castration in the treatment of psychoses. He divided the cases into four groups: (1) Genital organs healthy, 15 cases—4 cured, 4 temporarily cured, 7 unaffected or aggravated; (2) ovaries healthy, genital canal not so, 8 cases—6 cured, 1 temporarily improved, 1 aggravated; (3) ovaries diseased, canal healthy, 20 cases—13 cured, 3 improved, 4 unaffected; (4) ovaries diseased, canal more or less so, 14 cases—13 cured, 1 aggravated. Schramm has published 2 cases of epilepsy, Butler Smythe 1 of ovarian neuralgia, Merkel 3 of neuroses, cured by castration; Reamy 6 cases of epilepsy, of which 5 were cured; Imlach 1 success, Ceccherelli 3 cases of hysteropilepsy, Mundé 5 successes, all cured by castration. Rohé in 20 such operations had 2 deaths, 4 complete cures, 3 so far improved that they could be discharged, and 7 slightly improved. Kroemer, in 1895, reported 3 cases of hysteropilepsy and 1 of mania, all cured by castration, though not immediately after the operation.

On the other hand, Sharp, Goodell, Lusk, Lee, Fischkin, de la Tourelle, not to mention others, have reported failures, and are entirely opposed to castration as a method of treating nervous affections in general.

It seems possible that the difference in the results of operation depends on the time at which it is undertaken, that the failures have been when the genital disease has had time to establish its bad effect upon the nervous centres, and that the successes have been owing to timely operations. In any case the frequency of gynæcological diseases in women the subjects of psychoses, for which no other possible cause can be found, together with the fact that by an operation it is often possible to cure the sexual lesion, and at the same time cure or, at all events, relieve the mental disorder, compels one to admit that there must be some close connection between the psychoses and the genital organs, though the nature of that connection is still undefined, and also that it is justifiable to operate on the insane, not merely in order to cure their genital diseases, but with the hope of improving their mental condition.

If this be admitted, it follows that, as recommended by Hall, every woman mentally afflicted should be submitted to gynæcological examination, whether she complains of any genital disorder or not, and this should take place before her admission into an asylum; secondly, that as Schultze and Savage have suggested, a gynæcological expert should be attached to every asylum, whose duty it would be to diagnose the cases likely to be improved by surgical interference; and, thirdly, that in every asylum arrangements should be made for gynæcological operations, in order to avoid transferring the patients to another hospital.

All this applies to insane women who have genital disorders; but is it right to operate upon genital organs not manifestly diseased, as many have done? Gordon, for instance, advises castration whenever the nervous troubles are dependent upon the menstrual periods, even when the adnexa are healthy. Kelly and others concur in this view. And one could not blame anyone for trying to cure by castration a hystero-epilepsy which had not appeared till puberty, and then only at the menstrual periods, even though the ovaries seemed normal on palpation.

A different question is whether gynæcological operations are, as many authors affirm, more frequently than

others, followed by psychoses. Women, in any case, are more liable to post-operative psychoses than men. Fredericq has met with three cases of post-operative mania: Two after vaginal hysterectomy—one patient had the fixed idea that she must have the operation begun again by the abdominal route, the other developed ideas of persecution; the third case was one of melancholia, after a simple curettage for fungous endometritis. There are very few cases recorded at all like the last, of mental derangement after such a simple operation as curettage.

In the great majority of post-operative psychoses, the nervous troubles have followed the removal of the ovaries. Tait admitted their occurrence, but asserted that they did not persist, and that it was not right to judge of the effect of an operation till some time after it. Champonière states that there is a wide difference between abdominal surgery in general, and operations on the female genitalia, and that there is a difference equally wide between different ovariectomies; that the less disease affects the ovaries, the greater the impression produced on the nervous centres by their removal. Simple castration is much more dangerous as regards the nervous system than ablation of an ovarian tumour, that is to say, obligatory castration.

THE VALUE OF LEUCOCYTOSIS IN GYNÆCOLOGY.

DUTZMANN, Berlin (*Monats. f. Geb. u. Gyn.*, Bd. xviii., S. 243), gives the conclusions drawn from 2,000 examinations of the blood of 223 patients.

(1) The enumeration of the leucocytes is a valuable help in diagnosis in cases of exudation when purulent softening is taking place, and strengthens the indications for incision.

(2) The reaction of the white corpuscles to iodine when pus is present tends to confirm the diagnosis in doubtful cases.

(3) In gynæcological affections of the adnexa, with or without suppuration, the enumeration of the leucocytes is a useful means of differential diagnosis, and may be of importance in deciding upon the method of operation, vaginal or abdominal.

(4) In cases of myoma, carcinoma, or tubal gestation, it often constitutes the only evidence of a collection of pus in some part of the system (in the adnexa, in a hæmatocele, or in the uterine cavity).

(5) Tuberculous pus causes no increase, and gonorrhœal very little, in the number of leucocytes; facts that must be referred to greater tolerance and less absorptive power of the peritoneum for these bacteria.

(6) In cases of large ovarian tumours, especially those with twisted pedicles, and with great irritation of the peritoneum, there may be greatly increased leucocytosis in the absence of any suppuration; the iodine reaction will then give a negative result.

(7) In sepsis the count of white blood cells is very valuable for prognosis, inasmuch as persistent hyperleucocytosis is favourable, and a diminution in the number of white cells the reverse. From this singular fact one may perhaps learn the exact time for operative interference in puerperal fever.

(8) In eclampsia, the white blood cells behave as in sepsis. In hyperleucocytosis, the convulsions decrease in frequency; when the number of cells is normal or subnormal, the fits become more frequent and the case becomes worse. This supports the idea that eclampsia is due to infection.

CANCER OF BARTHOLIN'S GLAND.

FRITSCH, Bonn (*Monats. f. Geb. u. Gyn.*, Bd. xix., S. 60), reports the following case: A woman, aged 77, otherwise healthy, complained of a tumour of the external genitals, which had been growing for some three years, and at first small, now the size of a walnut, interfered with her walking. It gave rise to a profuse mucous discharge, which was sometimes very fœtid. The tumour was of a cauliflower form, composed of several lobes of tolerably firm consistence, of a red colour, like fresh granulations, covered with vitreous mucus, which when wiped off quickly reappeared, welling in drops out of the tissue. The growth was fairly movable. The inguinal glands on both sides, especially on the right, were swollen. It was easily removed with the right nympha, and the vaginal mucous membrane stitched to the skin; the wound healed well.

The form of the growth was that of a mushroom, and projected over healthy tissue on all sides. A section, hardened in alcohol, showed the stalk as a hard whitish strip of connective tissue reaching inwards for about 1 cm. The mass to the naked eye resembled a papilloma, it was apparently solid throughout, with no spots of extravasation or softening. Microscopically the stroma of firm connective tissue exhibited signs of inflammation, and a small abscess was in process of formation at one spot. At the base of the tumour there was a cyst the size of a hemp-seed, no doubt the remains of Bartholin's gland. Most of the growth presented the structure of a simple papilloma, but in some places there were evident signs of carcinomatous change. It was, in fact, a papilloma which had evidently originated from the polynuclear cylindrical epithelium of the duct of Bartholin's gland, and in various ways resembled villous vesical cancer.

BENIGN CYSTADENOMA OF THE VULVA.

PICK, Berlin (*Archiv f. Gyn.*, Bd., lxxi., S. 347), reports : In two cases, women of 40 and 45 years respectively, a number of new growths, some rather larger than a pea, were present in the labia majora, and were found to consist of well-developed glandular canals. Their structure exactly resembled that of normal sweat glands. The growths were tubular (cyst) adenoma of the type of the sweat glands, and not malignant.

THE ORIGIN OF VAGINAL CYSTS.

FREDET (*Ann. Gyn. Obst.*, 1904, March) sums up our present knowledge on the origin of vaginal cysts in the following conclusions : (1) No other origin for these cysts has been established with certainty except in aberrant tissue of the Wolffian canals, and pseudo-glandular canaliculi and the vulvo-vaginal glands. (2) A cyst on the upper part of the lateral wall of the vagina is possibly Wolffian ; if very low, it is probably derived from vulvo-vaginal gland tissue. (3) Cysts in the anterior wall of the vagina point to aberrant tissue derived from glands of the cervix or urethra as their origin. (4) Cysts on the posterior vaginal wall are the most difficult to explain ;

high up, they may originate from the pseudo-glandular diverticuli of Gartner's duct, or the canaliculi of the Wolffian body; lower down, in the median line, we may be dealing with an embryonic Douglas's cul-de-sac; near the vulva, vulvo-vaginal gland tissue may be the starting point.

P. Z. H.

DOUBLE CONGENITAL CYSTS OF THE VAGINA.

CON (*Revista de Chirurgie*, 1903, p. 416) reports: In a patient, aged 41, who came to the hospital on account of uterine hæmorrhage, there was a cyst as large as a nut in the left labium minus, and a similar one in the left side of the posterior vaginal vault about the level of the os tinæ. In shape each cyst was round and elongated; there was fluctuation, but no pain in either, and they were easily enucleated. In removing the upper cyst the peritoneum in Douglas's pouch gave way, and drainage was necessary, but the recovery was fever free and uninterrupted. The contents of each cyst was thick, opaque, yellowish-white, thread-forming matter.

Multiple vaginal cysts (two to six) are not common. In many cases those met with seem to be connected with each other; in others they are separated more or less extensively. They are invariably in one line, which is almost always directed from without inwards and from above downwards, a circumstance that makes it probable that the origin of the majority is in Gartner's ducts, the remains of the Wolffian canals, and that very few are extravaginal remains of Müller's ducts.

ANATOMICAL AND CLINICAL NOTES ON VAPORISATION OF THE UTERUS.

FUCHS (*Archiv f. Gynaek.*, Bd. lxxix., Heft. 3), in this work, limits the indications for vaporisation to conditions in which a new therapeutical influence is actually required, and records the beneficial effects obtained by this method in such conditions at the Kiel Klinik. The method, however, as there practised, is the systematic combination of curettage and the application of steam.

In 68 cases of uterine hæmorrhage so treated, Fuchs had 60 permanent cures (88·2 per cent.); immediate and

final menopause resulted in 18; arrest of hæmorrhage for some weeks or months, followed by normal menstruation, in 23; and, without any prolonged amenorrhœa, the catamenia became of normal or subnormal intensity in 19 cases.

In 3 of the 8 cases, which were but partially or not at all improved, curettage had been omitted; a fact which supports the importance of the preliminary use of the curette.

To avoid the danger of stenosis of the cervix, and especially of atresia of the internal os, Fuchs advises that no metallic terminals should be employed.

The successes obtained at the Kiel Klinik by the combination of curettage and steam are the more remarkable as it was only exceptional cases that were characterised as permanently cured on written reports; the patients were almost invariably subjected to personal control on many subsequent occasions.

HANTKE, Berlin (*Monats. f. Geb. u. Gyn.*, Bd. xvii.), reports that in Czempin's Klinik the use of hot steam is adopted for the purpose of bringing on the menopause. In climacteric hæmorrhages it has most brilliant success, and renders total extirpation quite unnecessary. It is also indicated by subserous and some forms of interstitial myomata, in which a radical operation is no longer possible, and by uncontrollable hæmorrhage after castration, and hæmophilia. Finally, it should be employed for inducing sterility instead of the methods employed hitherto.

PRECOCIOUS MENOPAUSE.

SIREDEY (*C. R. Soc. Obst. Gyn. Pæd.*, December, 1903), after mentioning tuberculosis, cancer, arterio-sclerosis, Bright's disease, cardiac affections, and chronic paludism as occasional causes of early menopause, refers to other cases in which women have unexpectedly ceased to menstruate ten, fifteen, or even twenty years before the average climacteric age. Some of these cases may be explained by excessive involution of the uterus after very frequent labours or prolonged lactation; but a large proportion of them occur in nulliparous or sterile women in whom a comparatively late appearance of the cata-

menia, and a scanty menstrual flow, justify the supposition that the genital functions were not normally developed. In other respects their health has been generally good, and, as a rule, the menopause causes them very little inconvenience, except, possibly, transient flushings of the face and giddiness, which the patients hardly ever consider of sufficient importance to lead them to consult a physician. This is in striking contrast with the effects of an artificial menopause, brought on by a surgical operation, which is often followed by intense nervous symptoms, constant flushes of heat, giddiness, vertigo, headache and tachycardia, to an extent which may preclude the patient from undertaking any kind of work, and often require prolonged treatment. One particular condition observable in cases of precocious menopause is the gradual effacement or atrophy of the cervix, and may furnish a guide to the diagnosis. As early as two or three months after the last appearance of the menses some atrophy of the cervix may be detected, although the body of the uterus still retains its normal size, and does not begin to atrophy until the cervix has dwindled to a mere prominence in the vaginal vault. This character distinguishes the atrophied from the infantile uterus, in which the cervix continues disproportionately larger than the body, and the portio vaginalis is considerable.

P. Z. H.

RETROFLEXION OF THE UTERUS AND ITS TREATMENT.

GRAEFE (*Graefe's Samml. zw. Abhandl.*, Bd. v., Hft. 2) insists that retroflexion of the normal uterus requires no treatment, as the troubles of which the patients complain do not arise from the displacement. A painstaking anamnesis and general, not merely gynæcological, examination will, as a rule, reveal chlorosis and hysteroneurasthenia, and these are the conditions which are to be cured, and it is better not to tell the patients that any displacement is present. It is, indeed, only when the invalid is possessed with the fixed idea that it is only by the correction of the kink in her womb that her sufferings can be relieved, that any steps should be taken in regard to it, and then it is better to abstain from pessary treatment, and to fix the uterus by the Alexander-Adams's operation. In cases

of sterility it is allowable to attempt a cure by remedying the retroflexion of an otherwise normal uterus, and this is so even when the uterus and appendages are fixed by adhesions. Retroflexion of the gravid uterus does not in every case require treatment, though reposition and the support of a pessary is advisable when the patient cannot be kept under close observation, especially if the fundus is very low down. Should symptoms of incarceration appear, even very slight ones, the above treatment is indicated, and the indication is also present when one or more abortions have occurred from a retroflected womb. If the gravid uterus be fixed by adhesions which have not yielded to repeated attempts at reposition, or several applications of the colpeurynter, and the organ be delayed in rising out of the small pelvis into the abdomen, laparotomy is justifiable in order to separate the adhesions and correct the displacement; an enlarged hyperæmic, tender, retroflected uterus should not be left alone, but should be replaced and fixed in anteflexion by a pessary or by operation. The same indications are present if one or both ovaries have descended with the fundus uteri. Such complications as metritis and endometritis must, of course, be treated at the same time.

ALEXANDER-ADAMS'S OPERATION.

STEIDL, Strassburg (*Monats. f. Geb. u. Gyn.*, Bd. xix., S. 234), reports that in sixty cases which were all, except as regards the incision, performed in the way originally described by Alexander, there were only 4·4 per cent. of recurrences, and that in four women who conceived after the operation, apart from some dragging pain, gestation and labour were normal. The cases are given in tabular form.

PROLAPSE AND THE ALEXANDER-ADAMS'S OPERATION.

JACOBY (*Archiv f. Gyn.*, Bd. lxx., S. 506) reports upon 257 operations for prolapse performed in Asch's Klinik at Breslau in the seven years 1894 to 1901. The results were controlled in 202, of which 94·5 per cent. were permanently cured. The proceeding chosen depended upon the particular conditions of each case, but the correction

of the position of the uterus was invariably undertaken when that organ in retroversion or retroflexion shared in the prolapse of the vaginal wall. For this purpose he recommends the Alexander-Adams's operation in every respect as giving better permanent results than any other method.

THE PERMANENT RESULTS OF OPERATIONS FOR PROLAPSE AND RETROFLEXION.

BAATZ (*Monats. f. Geb. u. Gyn.*, Bd. xix., S. 410) reports on the results of 217 operations for prolapse performed in the Koenigsberg Klinik by various methods; the results were ascertained in every instance by personal control, and generally by Professor Winter himself, and in none depended upon a written report. He compares the results of plastic operations in the vagina performed before and after Professor Winter took charge, and concludes:

Vaginal prolapse without retroversion of the uterus may be treated by plastic vaginal operations as extensive as possible. When combined with mobile retroversion of the uterus in women still possibly fertile, all primary prolapse of the uterus, and all prolapse with rigid retroflexion as well as all large and total prolapse, is best treated by ventrifixation and extensive plastic operations on the vagina. Prolapse of the vagina with mobile retroversion, in the climacterium, when the prolapse is neither total nor very large, is most successfully treated by vaginal fixation with extensive plastic operation. In uncomplicated retroflexion, whether mobile or rigid, ventral fixation gives the best result. When the portio is greatly hypertrophied, or the cervix much elongated, supravaginal amputation of the portio is desirable. The results at Koenigsberg, as those of Kroenig and Feuchtwanger, show that the Alexander-Adams's operation is not a reliable one for prolapse. As regards Hegar's statistics of 92 per cent. of permanent cures by plastic operations alone Baatz points out that results at all approaching them in success have not been obtained by any other operator. Baumm, who recently claimed to have cured 69.8 per cent. without rectifying the position of the uterus, depended, in three-fourths of his cases, on written reports of the cures.

THE EFFECT OF PREGNANCY ON THE CICATRICES OF PREVIOUS OPERATIONS UPON THE UTERUS.

v. FELLEBERG, Berne (*Archiv f. Gyn.*, Bd. lxxi., S. 306), reports two cases which show that after excisions or enucleations from the uterine wall the wounds must be most carefully sutured, if necessary in layers, and that the patients should be kept under observation during any subsequent pregnancy. In each case an abdominal section had been performed, and the uterine end of one tube excised by a wedge-shaped incision. Both the women conceived, and in one the uterus ruptured with a fatal result at the seat of the scar, presumably, owing to the implantation of the ovum near by; in the other, the wall of the uterus at the cicatrix seemed during the pregnancy and labour extraordinarily thin; the labour came on prematurely, and the child was dead; the puerperium, however, was normal.

v. CAUMONBERGHE (*Semaine méd.*, 1904, No. 9), referring to the Academy of Medicine of Belgium upon a communication of Herman, said: The patient was a dwarf, only 1.05 metres in height, upon whom Herman in April, 1903, performed Cæsarean section for the second time, two years after the former operation. On examination of the abdomen at full term, the head of the fœtus could be felt immediately below the skin, and Herman diagnosed a rupture of the uterus, with extrusion of the child into the abdominal cavity, and the child was extracted after laparotomy. There was no blood in the sac, the amniotic fluid was tinged with meconium; the placenta was broadly based on the posterior wall of the fundus of the uterus, while the anterior wall of the sac was formed by the omentum above, the abdominal wall in front, and the utero-vesical cul-de-sac below. It seemed that the cicatrix of the incision in the uterus made to deliver the former child had given way, and that the present gestation sac was partly within, and partly without, the uterus. The edges of the opening in the uterus were thick and rounded, and did not bleed; the amniotic sac followed the placenta, detaching itself from within outwards as far as the edges of the abdominal wound.

BISECTION OF THE UTERUS IN ABDOMINAL HYSTERECTOMY.

FAURE (*Semaine méd.*, 1904, No. 9), at the Société de Chirurgie, recently insisted on the advantages of bisection of the uterus in abdominal hysterectomy when the adnexa were adherent on both sides. When the adhesions affected one side only he recommended the American method of attacking the uterus, first on the free side, and turning it over upwards from below towards the other. But when both the left and the right adnexa were adherent to the pelvic parieties, as well as to the uterus, bisection, in his opinion, was the method of choice, as by it the adnexa on each side could be easily detached and removed with the corresponding half of the uterus. SCHWARTZ, on an experience of thirty or thirty-five cases, also approved of bisection. RICARD thought that no one now systematically adopted the same procedure in every hysterectomy, but varied the method employed according to the exigencies of each case.

EXTIRPATION OF THE SPLEEN : ITS INDICATIONS AND RESULTS.

JORDAN, Heidelberg (*Zentralb. f. Gyn.*, 1904, No. 15), says that extirpation of the spleen may now be considered not merely a justifiable, but an extraordinarily successful operation, the field for which is constantly being extended. While the function of the spleen is still obscure, no case free from objection has so far been brought forward to show that death has been directly due to deprivation of that organ, and it must be admitted that the function of the spleen can very quickly be supplied by other organs. Indications for the extirpation of the spleen are given by injury or traumatic prolapse, and absolutely by subcutaneous rupture, as Jordan exemplifies by reporting a case. He also describes six successful splenectomies performed by himself for various reasons, and quotes several others. Even a wandering spleen he considers is more safely treated by extirpation than by splenopexy. The prognosis of extirpation is favourable when the lesion is purely a local one, but, if it depend on constitutional disease, the operation is not merely useless, but directly dangerous to life. The manner in which the abdominal

incision should be made depends entirely upon the conditions of the particular case. Women are far more subject to lesions of the spleen than men.

THE CAUSES OF HÆMORRHAGE IN MYOMATOUS UTERI.

THEILHABER and HOLLINGER, Munich (*Archiv f. Gyn.*, Bd. lxxi., S. 289), have ascertained from the examination of eighteen myomatous uteri that the endometrium in cases attended with hæmorrhage does not differ in any characteristic way from that of cases which do not bleed; on the other hand, in the muscular tissue of the former the muscular areas are smaller, the connective tissue surrounding them thicker, and the blood vessels more numerous and of larger calibre, than in the latter. There is, in fact, the condition known as myofibrosis uteri.

THE DEGENERATION OF UTERINE MYOMATA.

WORRALL, Sydney (*Australian Med. Gaz.*, 1904, No. 1), reports the following cases: (1) M. C., aged 51, consulted a surgeon thirteen years ago for a tumour associated with profuse menstruation, and was told that it would disappear at the change of life. Four years later, as it had continued to grow, she consulted another surgeon, who gave the same opinion. The menopause occurred when she was 48, and the tumour did not increase in size till six months ago, since when it has done so rapidly, and she had become very weak, emaciated and dropsical. Abdominal hysterectomy relieved her greatly for a fortnight; but a mass formed in the liver, and she died exhausted, but without suffering, in a few weeks. The tumour was a mixed cell sarcoma. (2) J. H., aged 47, had suffered for three years from almost constant uterine hæmorrhage, and a gradually enlarging abdominal tumour. A smooth, elastic mass, extending three inches above the umbilicus, was removed by abdominal hysterectomy with some difficulty, owing to its soft, pultaceous character from myomatous degeneration and to deep peritoneal burrowing. The patient made a good recovery. (3) A multipara, aged 44, last child aged 13, had had menstruation lasting for several months, at intervals for the past two years. A prominent irregular tumour reaching nearly

to the umbilicus was removed by abdominal hysterectomy, and she had an easy recovery. The tumour was a beautiful specimen of myxomatous degeneration of a myoma in the posterior uterine wall. (4) E., aged 27, who had a fibroid polypus removed five years ago, and a year later was operated on for ectopic gestation, had had almost constant hæmorrhage for the past two years, and was quite blanched. Her uterus was enlarged as if three months gravid, and contained a submucous myoma undergoing myxoid degeneration. She made an easy recovery after abdominal hysterectomy. (5) R. H., single, aged 43, had a severe attack of peritonitis eighteen months ago, when the doctor in attendance discovered an abdominal tumour. A year ago she was advised by a surgeon that the tumour would probably disappear at the change of life. It had, however, rapidly increased in size during the past few months, and her menstruation was very profuse, lasting a fortnight. Abdominal hysterectomy. The tumour was a multinodular myoma, the pedicle of which had undergone axial rotation from left to right three times. It was extensively adherent to the parietes, and to the omentum from the dilated vessels in which it had been nourished. On section it presented a large softened area, resembling brain tissue and suggestive of malignant change, but proving to be a necrobiosis from impeded vascular supply. A good example of the origin of peritonitis from torsion of the pedicle of a myoma, and of compensating blood supply through omental adhesions. (6) E. M., hysteromyomectomy and removal of the appendages for a right multilocular ovarian cyst, the size of a pear, and a sessile outgrowth from the posterior uterine wall in the centre of which there was a large focus of calcareous degeneration. She had suffered from severe hypogastric pain for four months, and the tumour was increasing in size.

Worrall insists that though the various degenerations of myomata are recognised in the text-books, sufficient importance is not given to the evil effects of these tumours on the general health, owing to anæmia, cardiac change and renal destruction, and also to degenerations and infections of the tumours themselves. Of the myomata he had removed in the past three years, 15 per cent. were undergoing degeneration of one kind or another. The

first case reported is an absolute proof that sarcomatous degeneration does occur, but even if histologically benign, a degenerating tumour of the uterus is clinically malignant, and surely, even if slowly, fatal.

SARCOMATOUS DEGENERATION OF MYOMATA.

HAUBER (I. D., Muenchen, *Zentralb. f. Gyn.*, 1904, No. 11) describes three instances of sarcomatous degeneration of myomata from the private practice of Professor Klein; they occurred among 138 cases of myomata. He comes to the following conclusions: About 3 per cent. of the myomata removed by operation exhibit sarcomatous degeneration. Even after the menopause, therefore, myomata may not be considered free from danger, but should be examined at least every other month. If they are evidently increasing in size, especially after the climacteric, the safest course is extirpation. The results of well-timed operations for myoma, when there is little or no degeneration of the heart, are so favourable that it is better to operate on myoma which are still certainly innocent, than on such as have become malignant. It is only such myomata as remain constant in size or are diminishing that may be considered to be free from danger, and even these should be kept under observation. Nevertheless, the enlargement of myomata during gestation must not be in itself considered an absolute indication for operation.

MYOMA AND HEART DISEASE IN THEIR CAUSAL RELATION.

FLECK, Goettingen (*Archiv f. Gyn.*, Bd. lxxi., S. 258), states that in 325 cases of myoma coming under observation during twelve years, 133, that is, a percentage of 40.9, were suffering from pathological cardiac lesions. This statement, however, includes every variation from the normal conditions of the heart. He believes that in reality the percentage of heart disease in uterine myoma is considerably higher, or that possibly both the uterine and cardiac affections are due to a common cause, some anomaly in the processes of metabolism. This is suggested by the comparative frequency of obesity, and the constant occurrence of gross anatomical changes in the ovaries, in association with uterine myomata.

THE TREATMENT OF UTERINE MYOMATA.

PFANNENSTIEL, Giessen (*Deutsche m. Wchns.*, 1904, No. 14), disapproves of injections of ergotin and intra-uterine measures in general, considering the curette should not be used unless the whole of the intrauterine mucosa can be brought within the reach of the finger and curette, nor unless the cavity is empty, that is to say, is not made uneven by projecting tumours, or except after the removal of submucous myomata. He defines the indications for operation as: (1) A certain size of tumour; (2) acute suffering; (3) submucous myomata (hæmorrhage); (4) eccentric and deeply-seated tumours that are getting larger, especially such as are subvesical and may press on the urethra, or lateral, and lead to injury of the veins or thrombosis; (5) pediculate subserous tumours apt for torsion or incarceration; (6) quickly-growing myomata, suggesting sarcoma; (7) all cases which are complicated by the myoma. The best time for operating, in his opinion, is after the menstrual period.

Conservative myotomy should not be made a matter of principle, and in large interstitial or multiple myomata, and in diffusely extended adenomyoma, the corpus uteri should be removed with the tumour. Enucleation is best adapted for submucous polypi. Too much care may be bestowed on preserving the power of conception, but hardly upon preserving the function of the ovaries. Pfannenstiel is in favour of abdominal rather than vaginal operations, but lays great stress upon an aseptic condition of the uterine cavity and cervical canal. He has abandoned abdominal total extirpation.

THE SCIENTIFIC BASIS FOR CONSERVATIVE OPERATIONS FOR MYOMATA.

WINTER (*Zeitschr. f. Geb. u. Gyn.*, Bd. li., Hft. 2), on the basis of his own cases in the Koenigsberg Frauenklinik and those of his predecessor Dohrn, and a series of statistics recently published, discusses from every point of view the differential indications which have to be considered in deciding in individual cases whether radical or conservative operation is the more suitable. The hypotheses relied on are briefly as follows: Conservative

operation preserves the menstrual function; it enables some women under 40 years of age to conceive; it is not followed by omission symptoms. On the other hand, even when every nodule that can be seen or felt is removed, conservative operation is not a sure preventative against recurrence; it does not certainly remove the patient's sufferings, and its immediate results, when it is vaginal, and still more when it is abdominal, are less favourable than radical operation. Winter therefore concludes:—

Conservative measures are indicated absolutely: by all subserous tumours with slender pedicles if the uterus itself is free from any myomatous nodules; by all submucous tumours in process of expulsion, even though they be so large as to make the uterus reach above the navel, it being presupposed that the lower pole of the tumour can be forced into the pelvis, and that the corpus uteri is freely movable.

Radical operation is absolutely indicated by myomata in sarcomatous degeneration, and by such as are combined with carcinoma.

The following tumours call for the exercise of judgment: Broadly inserted subserous myomata; myomata entirely interstitial, provided that the enlargement of the uterus is but moderate; large submucous myomata with broad insertions when the cervix is closed, and the various forms of multiple myomata.

Winter defines his own point of view: Uterine myomata in general demand radical operation. Conservative operation is justified in suitable cases if the patient earnestly desires children, and if she sets much value on retaining her menstrual function. During pregnancy, conservative measures are generally to be preferred, and radical operation to be limited to well-defined cases.

TOTAL OR SUBTOTAL HYSTERECTOMY FOR FIBROMATA.

JACOBS, Brussels (*Bull. Soc. Belge Gyn. Obst.*, t. xiv., No. 4), in connection with the recent discussion at the French Society of Surgery (*ante* vol. xix., Summary, p. 186), opened the same question in the Belgian Gynæcological and Obstetrical Society. He confessed that he had formerly been a partisan of total abdominal hysterectomy for fibroids, on the grounds of one personal and several reported

observations of malignant degeneration of the stump. He had, however, changed his opinion and was opposed to the view of Richelot. If the cervix was a bad one, enlarged, lacerated and torn, with large ectropions, &c., he admitted that total extirpation was the proper course; but if, as he took it to be in most cases of fibroma, the cervix was normal, he was entirely in favour of subtotal hysterectomy. Fibrous tumours undoubtedly tend to degenerate, but the degeneration is rarely malignant. Fibroma and cancer being the two diseases most commonly affecting the uterus, it is natural that we should all see the combination of the two occasionally. But it does not follow that the fibrosis has any influence in causing malignant degeneration of the stump, and as yet no statistical evidence has been brought forward to support that idea. He was now decidedly in favour of subtotal hysterectomy for fibroids. He had performed several hundred total hysterectomies, many hundred subtotal, and his mortality was practically the same for the two operations; but he held that if both methods offered the patients the same prospect of cure, it was desirable to avoid opening the vagina. Total hysterectomy was the longer of the two, it was always more laborious, and, in spite of all that had been said at the French Surgical Society, was liable to be attended by serious hæmorrhage.

CHORIO-ECTODERMAL EPITHELIOMA.

L. LANDAU, Berlin (*Zentralb. f. Gyn.*, 1904, No. 7), has seen five cases of chorio-ectodermal epithelioma, and gives the histories of three. All patients were young people, all were operated upon, and with one exception all died from recurrence or metastases, which proves the malignity of these tumours. Landau thinks them to be not very uncommon, and does not suppose that any parasite is a factor in their development.

CHORIONEPITHELIOMA.

REEB, Strassburg (*Archiv f. Gyn.*, Bd. lxxi., S. 379), reports the following cases from Fehling's Klinik: (1) A quintipara, aged 26, had hæmorrhage four weeks after child-birth, and a fibrinous polypus and some remains of decidua were removed with the finger; three weeks

later the hæmorrhage recurred, the curette was then used and a diagnosis of chorionepithelioma made, upon which the uterus, adnexa, and a tumour in the vaginal vault the size of a pea, were extirpated by the vagina. Fatal hæmorrhage occurred on the thirty-fourth day after the operation. Metastases were found in the omentum, lungs and paravaginal tissue. (2) A decipara had hæmorrhage four weeks after an abortion in the third month. On palpation and the use of the curette a diagnosis of syncytial new growth was made, and the uterus was extirpated by the vagina. No recurrence had taken place ten months later.

PRIMARY GENITAL TUBERCULOSIS.

GOTTSCHALK (*Archiv f. Gyn.*, Bd. lxx., S. 74) reports a case of extreme tuberculous disease of the ovaries and tubes which had been under observation, and remained cured, for three years after vaginal total extirpation. In the ovaries there were sacs of caseous matter, the contents of which (as also that of the tubes) proved quite virulent. Arising from the posterior lip of the os uteri there was a peculiar cauliflower villous growth, of which the epithelium under the microscope proved polymorphous and exhibited stratification, vacuolisation, and was beset with tubercle. As the patient, an intact virgin, was not affected with any other tuberculous deposits, and her father was a tuberculous person, Gottschalk supposes that there had been transmission by the semen, and that the tuberculosis was primary and hereditary. According to Boveri, we may suppose that such tubercle bacilli as are transmitted by the semen infect those portions of the fertilised ovum only from which the germinal cells of the new organism are produced. This would explain how the disease primarily affected the ovary and from thence descended to the tube.

TUBERCULOSIS OF THE FEMALE GENITALIA.

SCHAKHOFF (I. D., Geneva, 1903, *Zentralb. f. Gyn.*, 1904, No. 14), from the examination of forty-three specimens in the Pathological Institute at Geneva (Prof. Zahn), draws the following conclusions: Tuberculosis of the female genital organs is comparatively uncommon. but

may affect any part of the genital tract, most frequently the tubes, rarely the cervix, and most rarely the vagina. It affects women of every age, but is most common between 20 and 40. It is generally secondary to tuberculosis of the lungs or bronchial glands, more rarely to intestinal disease, and with the exception of the vagina, which may be infected from without, the affected parts are contaminated through the blood-vessels. The peritoneum is often involved, especially when the tubes are diseased. Tuberculosis is conveyed from a primary focus, directly, by the blood-stream, to the tubes, and from thence, by continuity, to the uterus or peritoneum. The uterus may be affected, directly, from a primary focus; but is so more commonly by continuity from the tubes. In the former case a predisposing factor may be found in the puerperal state, or some affection which, by mechanical irritation, induces an active hyperæmia. Vaginal tuberculosis occurs, secondarily, owing to descent from the tubes or uterus; when primary the infection is from the urine or fæces. The ovaries may be affected from the tubes, peritoneum, or rectum, by continuity through adhesions; but ovarian tuberculosis may also occur quite independently of any disease in its neighbourhood, owing to infection through the circulation, from a primary focus in some other part of the system.

ON THE COMBINATION OF CARCINOMA WITH TUBERCULOSIS OF THE UTERUS.

WALLART, St. Louis (*Zeitschrift f. Geb. u. Gyn.*, Bd. 1., Hft. 2), draws the attention of gynæcologists to the reports of two cases of uterine tuberculosis associated with carcinoma, observed by himself and published by Kaufman in the second edition of his text-book. In the first, the patient was a woman of 55, who was curetted, and in the abraded portions of the uterine mucosa numbers of caseated tubercles with giant cells were found, together with adenocarcinoma. In the second, the patient, a woman of 50, had secondary genital tuberculosis by descent from the peritoneum to the tubes and uterus, probably due in the first place to primary pulmonary disease. Contrary to the usual condition of things in such cases, the cervix had undergone serious alteration, as it showed the extremely

rare combination of tuberculosis with carcinoma; moreover, it was evident that the carcinomatous changes in the cervical tissue were of later origin than the tuberculosis which had already affected the paracervical glands, while the cancer was limited to the inmost layers of the cervix. In a third case he has found caseous tuberculosis of the mucosa of the corpus in a woman of 37, associated with extensive cervical carcinoma. As the two diseases were at some distance apart, the author considers the association merely a coincidence.

With regard to his second case and similar ones elsewhere published, Wallart believes that in some instances tuberculosis of the uterus, especially of the cervix, may constitute the predisposing factor for carcinoma. He believes, further, that the combination of carcinoma and tuberculosis in the uterus is not so uncommon as has been supposed.

CO-EXISTENCE OF CARCINOMA OF THE OVARIES AND OF THE CORPUS UTERI.

BOECKELMANN (*Thesis*, Leipzig, *Zentralb. f. Gyn.*, 1904, No. 4) reports a case of bilateral carcinoma of the ovaries, with co-existing carcinoma of the corpus uteri. While the latter exhibited the structure of adenoma malignum, the ovarian tumours were distinctly papillomatous in character. The cancer of the corpus he considers to be primary, and the ovarian tumours not to be metastasis, but independent new growths. [*Cf.* Dr. Gelston Atkins's Case, *ante* p. 46.]

ADENOMYOMA OF THE UTERUS.

CULLEN, Baltimore (*Orth-Festschrift*, 1903), describes a series of cases of adenomyoma of the uterus that came under observation and operation at the Johns Hopkins Hospital, and illustrates the histological details of the several cases by a number of excellent drawings. In the adenomata of the corpus uteri the first change is a diffuse myomatous thickening of the inner muscular wall with which is associated a penetrating ingrowth of the normal mucosa into the diffuse myomatous growth. Portions of this myoma may become subperitoneal or intraligamentary, and often form large cystic adenomyomata, while

other portions of the diffuse new growth may project into the cavity of the uterus in the form of submucous adenomyomata. Cullen also describes a unique instance of adenomyoma of the cervix, with cervical glands. The theory of a causal nexus between the adnexa and uterine adenoma was not supported in any way by the results of examination of the tubes and ovaries in fifteen cases.

The differential diagnosis of adenomyoma from myoma of the uterus is not a matter of certainty. The growth is innocent, as is proved by two cases in which the cure was effected though the growth was but partially removed. Adenocarcinoma of the corpus uteri may develop from an adenomyoma, as in a case described by Cullen. He also describes a diffuse adenomyoma of the corpus uteri in a case of squamous epithelioma of the cervix, and another case in which adenocarcinoma and adenomyoma, quite independent of one another, were found in the same uterus.

On the origin of adenomyoma of the uterus, Cullen expresses himself as follows: "All adenomyomata of the uterus, in which the glandular elements resemble those of the uterine mucosa, and which are surrounded by a stroma of the same character as that surrounding normal uterine glands, owe the origin of their glandular elements to the uterine mucosa or to Müller's ducts, just the same whether they are interstitial, subperitoneal or intraligamentary, and whether they are solid or cystic.

In regard to adenomyomata arising from the uterine portion of the uterine cornu, Cullen thinks that in the greater number of cases their glandular elements are derived from the uterine mucosa, while the glandlike spaces in the adenomyomata from the tubal portion of the cornu generally depend on external prolongations of the tubal mucosa. In adenomyomata of the round ligament Cullen supports the view that they owe their origin to aberrant portions of Müller's ducts.

METASTASES OF UTERINE CARCINOMA IN THE ILIAC GLANDS

MANTEUFFEL, Halle (*Hegar's Beitrage*, Bd. viii., Hft. 2), from a comparison of the results of clinical investigation of the condition of the iliac glands with those of microscopical examination, concludes that the limits of a radical operation cannot be settled on the basis of the former.

Metastases in the glands are of such extreme importance in the general aspect of recurrence of uterine carcinoma, that the extirpation of the glands is almost essential for radical operations, and should, on principle, always be attempted.

FURTHER EXPERIENCE IN THE ABDOMINAL EXTIRPATION OF THE CARCINOMATOUS UTERUS.

KROENIG, Jena (*Monats. f. Geb. Gyn.*, Bd. xix., S. 205), reports further upon 53 cases of uterine carcinoma, on 38 of which he performed a radical operation, which in 23 was his own modification of Wertheim's abdominal total extirpation (1 death from hæmorrhage); in 11, the transversal incision keeping the field of operation extraperitoneal (2 deaths); in 2 other cases, transverse incision with temporary extraperitoneal field, both fatal; and two vaginal total extirpations. After discussing the technique, advantages and disadvantages of the various methods, Kroenig considers that the hopes he expressed as to the results of his modification of Wertheim's method in regard to mortality and convalescence have been fulfilled.

In advanced cancer, which is immovable even under narcosis, and in which it may be expected that the bladder and ureters are involved, Kroenig now makes the transverse incision, and keeps the operation field extraperitoneal in Mackenrodt's way, in spite of the drawbacks of the increased danger of infection, owing to the cavity left, and the extensive wound in the connective tissue, and of the increased anxiety in regard to the functions of the bladder, consequent upon the loss of abdominal pressure in the early days after the operation. The extension of the indications afforded by the transverse incision rendered partial resection of the bladder and ureter necessary in six cases, but the dangers of shock and escape of urine after resection of the bladder or ureters is less than by other methods.

Four cases of recurrence were operated on, and their subsequent course was encouraging.

When, on abdominal section, radical measures were found to be out of the question, Kroenig in every case ligatured the arterial vessels, and removed the ovaries

if they were not past their activity. In this way, with simultaneous vaginal treatment, he hopes in future to obtain, at all events, good palliative results.

LAPAROTOMIA HYPOGASTRICA EXTRAPERITONEALIS.

MACKENRODT'S method, as described by him to the German Gynæcological Society in 1901, is as follows: A curved incision is carried through the skin from one anterior iliac spine to the symphysis, and then to the other spine; both recti are then detached from the symphysis, the peritoneum is detached from behind them almost up to the umbilicus, and the abdominal walls at each side are cut through in the same line as the wound in the skin. The peritoneum is then opened where its anterior fold passes on to the wall of the bladder; adnexa and corpus uteri are drawn out, the spermatic vessels are tied and divided, and the peritoneum is immediately closed. The whole of the rest of the operation, including the removal of the uterus and clearing out the hollow of the pelvis, is entirely extraperitoneal. Free drainage of the cavity left.

In 1902 he reported to the Berlin Gynæcological and Obstetrical Society on 11 cases of laparotomia hypogastrica extraperitonealis, as he calls his operation. Of these 10 were for uterine, 1 for rectal carcinoma—all cases of advanced disease; one woman died from the operation. In nearly every case in which he has seen recurrence take place after operation for cancer he is satisfied that the lymphatic glands played an important part in the recurrence, and this especially in cases in which, at the time of the operation, the glands were not even swollen; he is, therefore, convinced that it is not enough to remove, as Wertheim does, the glands which are enlarged, but that the whole of the glands and lymphatic vessels must be extirpated. He claims that his method is really radical, and that he has improved the prognosis of the operation as by exact and thorough treatment of the extensive connective tissue wound he is able with almost perfect certainty to avoid exudative inflammation of the connective tissue, even when there is putrid pyometra. He knows no way to prevent peritonitis after the older operations. As his results have improved he has extended the indications.

[Continental surgeons are not by any means likeminded about the surgical treatment of uterine cancer. Many agree with Fritsch that, after a few years, the old vaginal methods will, when not applied to cancer in which recurrence is certain, but confined to "good cases," be properly appreciated. Early diagnosis and prompt operation will do more to secure better results than extended indications.]

UTERINE CARCINOMA, ABDOMINAL OR VAGINAL TOTAL EXTIRPATION.

v. HERFF (*Korrespondenzblatt. f. Schw. Aerzte*, 1904, No. 3), after a careful review of the cognate literature, and a detailed appreciation of his personal experience, concludes that as yet there is no obligation to operate upon all cases of cancer of the uterus by the abdominal way. He prefers in favourable cases of cancer of the portio the vaginal operation (a modification of Schuchardt), supplemented by a limited investigation of the glands when the disease is moderately advanced; but in cancer of the corpus the abdominal operation. In any case the future of the surgical treatment of uterine cancer, in his opinion, does not depend so much upon performing as extensive extirpation as possible, but rather upon operations being carried out in the earliest possible commencing stage of the new growth.

UTERINE CARCINOMA AND PREGNANCY, WITH SOME REMARKS ON VAGINAL CÆSAREAN SECTION.

ORTHMANN, Berlin (*Monats. f. Geb. u. Gyn.*, Bd. xviii.), reports upon 116 cases of uterine carcinoma which came under observation within three years and a quarter. Six of the cases were complicated by pregnancy, one being past operation. In another case, at the end of pregnancy, there was advanced carcinoma of the portio and cervix. An incision was made round the portio, the bladder pushed out of the way and the anterior wall of the cervix was divided without opening the plica vesico-uterina, and a child, 8 lbs. in weight, was then extracted, but not without further tearing of the incised wound and some laceration of the anterior vaginal and posterior vesical walls. The uterus was then extirpated. The bad condition of

the patient necessitated the vaginal method. Orthmann concludes from this case that vaginal Cæsarean section enables us to effect immediate delivery by the vagina, and to follow it by vaginal extirpation of the uterus at any time, even at the end of pregnancy, in any case in which vaginal extirpation can be considered.

Generally the division of the anterior wall alone is required. Version and extraction is the quickest way of delivering the woman, and the least trying for her. The most favourable prognosis for mother and child in circumscribed carcinoma of the portio, or commencing cancer of the cervix, is afforded by extirpation after delivery. In advanced disease, an abdominal operation is indispensable.

CANCER OF BOTH OVARIES IN A GIRL, AGED 14.

KOUZNETZKY (*Ann. Gyn. Obst.*, March, 1904) reports a case of a girl, aged 14, who came to him for treatment, complaining of pain, sometimes violent, and of a tumour in her abdomen, which had been noticed for the first time about six months before. He found, on palpation, a mobile tumour as large as two fists, and somewhat irregular on the surface, which he diagnosed to be a malignant neoplasm of the ovary or omentum. On December 19, 1900, he opened the abdomen and removed the tumour, which was found to be the right ovary. The left ovary was about the size of a walnut and lobulated on its surface, and it was also removed. Both were submitted to microscopical examination, and were pronounced by Dr. Martzinovsky and Prof. Nikiforov, of the Pathological Institute, of Moscow, to be affected with medullary cancer. On November 24, 1902, nearly two years after the operation, Dr. Kouznetzky had occasion to see the patient, who had grown considerably. She felt very well, and was in domestic service. No indication of any return of the disease could be detected.

P. Z. H.

ENDOTHELIOMA OVARIÏ (HÆMANGIOSARCOMA), WITH METASTASES IN THE LYMPHATIC GLANDS AND UTERUS.

FEDERLIN, Strassburg (*Hegar's Beitræge*, Bd. viii., Hft. 2), found in an ovarian tumour a structure formation

that seemed connected with the blood-vessels, inasmuch as numerous superimposed layers of cells surrounded a blood-vessel like a cloak. Moreover, even in the connective tissue there were cords of the new growth that, by their arrangement, gave the impression that they had developed in pre-existing spaces; the inner surface of the smaller cysts was lined by a coating of many layers of cells, in many places projecting inwards in the form of papillæ. The same structure was found in a nodule in the uterus; moreover, in the lymphatic glands there were indications of alveolar structure.

PSEUDOENDOTHELIOMA OF THE OVARY.

POLANO, Wuerzburg (*Zeitschr. f. Geb. u. Gyn.*, Bd. li., Hft. 1), reports five cases of malignant degeneration of the ovary, which were pronounced to be endothelioma ovarii by eminent authority, and which he has selected from a very large number for publication in detail, as being characteristic of certain types of erroneous diagnosis. None of these five cases were endothelioma; two were genuine adenomatous carcinoma of the ovary, two were ovarian metastases of carcinoma of the stomach, and one was a malignant ovarian struma (goitre). These being the chief sources of error, the tumours even to the naked eye are so different from each other that in the majority of cases it will seem possible, even without any microscopical examination, to make a correct diagnosis promptly. In true adenomatous cancer, the tumours are generally large, soft and friable, and owing to extravasation of blood, suggest torsion of the pedicle, while, internally, they exhibit well-marked medullary and necrotic areas. Malignant ovarian struma is characterised by a typical reticulated network of hollow cavities, which, in their structure and contents, closely resemble honeycomb. In ovarian metastases of cancer in other organs we find hard, nodulated tumours, generally of moderate size, which almost invariably show considerable œdema in their central parts.

Whenever there is reason to fear that an ovarian tumour may be malignant, an exact chemical examination of the contents of the stomach and intestine should be made. Should this afford no positive evidence of cancer, an ex-

ploratory laparotomy should be undertaken and all the viscera of the abdominal cavity, and the peritoneum, the stomach and the lumbar lymphatics, should be explored by palpation. Should the result point to a primary carcinoma of a single ovary of no excessive size, the indication is to perform bilateral salpingo-oöphorectomy and supravaginal amputation of the uterus. But this proceeding is contraindicated in all ovarian cancer that is not primary, or that is really bilateral, or even if unilateral, complicated by serious adhesions, or by metastases in the peritoneal cavity or lymphatic glands.

AN INSTANCE OF TOTAL SEPARATION OF AN OVARY AND ITS DISPLACEMENT INTO THE ANTERIOR DOUGLAS.

STROBEL (I. D., Munich, *Zentralb. f. Gyn.*, 1904, No. 11), relates the following case: In a woman of 57, who died from intestinal cancer, the uterus was found to be 8 cm. long, the left ovary and tube were normal; but on the right side, at the seat of the insertion of the tube, there was merely an appendage, 1 cm. long and 0.4 cm. thick, which terminated in a rounded blind end, into which no probe could be passed, the peritoneum covering it smoothly all over. In the utero-vesical pouch, hanging back from the bladder on a pair of bands, 3 cm. wide, there was an oval body, 4 cm. long, 2.8 cm. thick, and 3 cm. broad, planted on which and wound spirally about its longer axis there was a cord 7 cm. long. No other inflammatory processes in the form of fibrous bands were to be found in the genital organs. The microscopical examination showed that the body in the utero-vesical pouch was the ovary and tube detached from the right side of the uterus. It is of some etiological import, perhaps, that when 21 the patient had peritonitis, and for two days faecal vomiting.

NOTES.

WE have with regret to record the following deaths :—

Dr. PETER G. DE SAUSSURE, on March 8, 1904, aged 46, at Charleston, Professor of Obstetrics, Gynæcology, and the Diseases of Children, in the Medical College of the State of South Carolina, where he had graduated.

Dr. M. T. BRENNAN, on March 12, 1904, aged 42, Gynæcologist of Notre Dame Hospital, and for fourteen years a Professor of Laval University. He was a native of Montreal.

Dr. STEPHEN P. TRUEX, aged 48, suddenly, on March 31, 1904, while performing an operation in the Bashwick Central Hospital. He was Gynæcologist to the Long Island College Hospital, and Lecturer on Obstetrics and Gynæcology in the Manhattan Post-Graduate Hospital.

Dr. MAX VON STRAUCH, Privat-dozent of Obstetrics and Gynæcology at Moscow.

Professor Geheim Medicinalrat Dr. ADOLF GUSSEROW, Director of the Charité Frauenklinik of the Midwives Training School at Berlin, retired at the end of the Winter Session.

Professor ERNST BUMM, of Halle, has succeeded Professor Gusserow in the Chair of Obstetrics and Gynæcology at Berlin.

Professor KUESTNER, of Breslau, and Professor HOFMEIER, of Wuerzburg, declined the position at Halle vacated by Professor Bumm, which has now been filled by the appointment of Professor J. VEIT, of Erlangen, as Professor of Obstetrics and Gynæcology and Director of the University Frauenklinik at Halle.

Professor JOHANNES PFANNENSTIEL, of Giessen, has succeeded Professor Veit at Erlangen. and Professor B. KROENIG, Director of the University Frauenklinik at Jena, has succeeded Professor Veit at Erlangen.

Professor BUMM has been made a Privy Councillor, and Professor KUESTNER has been decorated with the Third Class Order of the Royal Crown of Prussia; he was already a Privy Councillor.

The following appointments as Privatdozenten are announced, the "venia legendi" in Midwifery and Gynæcology having been granted to: Dr. PAUL STROEMER, at Giessen; his test Lecture was "On the Prophylaxis during Pregnancy of Morbidity in Childbed"; Dr. RICHARD FREUND, at Munich, who qualified with an essay on "The Blood-vessels of the Normal and Diseased Uterus"; and to Dr. R. ALBENZIO, at Naples.

The Royal Imperial Society of Physicians at Vienna announces that the Goldberger Prize will be adjudged in October, 1906, for the best essay upon "The Influence of Pregnancy upon Tuberculosis of the Respiratory Organs."

Professor FEHLING, of Strassburg, has been made an Honorary Fellow of the Italian Gynæcological Society.

Professor HEGAR has been presented with the Freedom of the City of Freiburg.

Our distinguished Honorary Fellow, Dr. THOMAS ADDIS EMMET, recently celebrated his golden wedding at his home in Madison Avenue, Manhattan.

Dr. HENRY MACNAUGHTON-JONES was recently elected a Corresponding Fellow of the Munich Gynæcological Society.

Dr. C. T. CULLINGWORTH, who this month delivers the Ingleby Lectures in the University of Birmingham, taking as his test, "A Plea for Exploration in Suspected Malignant Disease of the Ovary," is to be given the honorary degree of LL.D. by the University of Aberdeen.

At the weekly meeting of the Managers of the Edinburgh Royal Infirmary on March 21, Dr. F. W. HAULTAIN, F.R.C.P.E., was appointed an Assistant Gynæcologist to

that institution. There were eight candidates for the vacancy, due to the lamented death of Dr. R. Milne Murray. The appointment of Dr. Haultain meets with the almost unanimous approval of the medical profession in Edinburgh. He is a most successful lecturer on midwifery and gynaecology in the Extra-mural School. He had, last winter session, the largest class (159 students) on record in the school.—*B. M. J.*

At a meeting in Belfast last May, it was decided to present to Professor J. W. BYERS a portrait in oils of himself to be hung in the Examination Hall of Queen's College, Belfast, and to Mrs. Byers a replica of the portrait, in recognition of the courage and frankness with which he had so victoriously defended himself from a very disagreeable action. The esteem and regard in which the Professor is held was demonstrated when on March 18, 1904, in the Great Hall of the Queen's College, the portrait painted by Henrietta Rae was unveiled by the Right Hon. Thomas Sinclair, in the presence of a large number of the most distinguished people in Belfast and the North of Ireland, and accepted on behalf of the College by the Rev. Dr. Hamilton, the President, who occupied the Chair. The Right Hon. Thomas Andrewes made the presentation of the replica to Mrs. Byers, and a large number of speeches was made eulogising the Professor and expressing the kindest wishes for him and his wife, and for their son.

The Birmingham and Midland Hospital for Women, the demands upon which have greatly increased since it was first opened in 1871, is to be accommodated in a new building, the foundation stone of which was laid on April 20 by Mr. Arthur Chamberlain.

The January number of *American Gynaecology* was destroyed in the Baltimore fire, and the issue of that excellent journal has been delayed for the present.

SUMMARY OF GYNÆCOLOGY, INCLUDING OBSTETRICS.
AUGUST, 1904.

CHLORINE ASEPSIS.

STEWART (*Amer. Jour Obst.*, January, 1904) advocates, as the best solution for rendering the skin aseptic, an acid chlorine one, composed of acetic acid two teaspoonfuls, calx chlorinata four teaspoonfuls, and cool sterile water one quart. Five minutes' scrubbing with this, after five minutes' proper mechanical cleansing, has always prevented the growth of streptococcus, staphylococcus, and bacillus communis coli, after the hands were intentionally contaminated with those germs. The solution does not make the skin sore. To destroy the germs on the vulva, the solution should be diluted with two additional parts of water. The odour of chlorine can be removed by washing the hands in two tablespoonfuls of acetic acid mixed with a quart of water.

J. F. J.

ADRENALIN IN GYNÆCOLOGY AND OBSTETRICS.

FENOMENOFF, Kasan (*Therapia*, 1904, No. 1), has used adrenalin to arrest hæmorrhage in a series of operations upon the uterus and vagina. He soon found that the effect of the drug upon the uterine mucosa was not the same as on that of the vagina. In the excision of portions of the mucosa from the vaginal wall in colporrhaphy, he did not when using adrenalin notice any loss of colour in the mucosa, nor any decrease in the usual amount of bleeding. The vaginal mucous membrane, in fact, does not react to the direct application of adrenalin. On the other hand, when the portio vaginalis or cervical mucosa were treated with the preparation, the blood lost (for instance, in curetting) was much less; the red portio assumed a blue colour, the curetted material was pale, and the hæmorrhage, compared with what it had formerly been, was reduced to a minimum.

While incision of the vaginal portion otherwise led to rather free bleeding, if the part had been previously painted with adrenalin there was hardly any at all. Under the use of adrenalin, mucous polypi of the uterus could be removed without any loss of blood, and they lost their colour and shrivelled up. These observations suggested that adrenalin might be beneficially employed in hæmorrhagic endometritis, by the direct application of a solution in the cavity of the womb.

To determine the effect of adrenalin solutions upon the peritoneum, Fenomenoff made a number of experiments upon rabbits, in which, after an aseptic laparotomy, a gauze plug saturated with a one per mille solution of adrenalin was kept for half a minute in contact with the abdominal serosa. The part so pressed upon changed its colour and appeared as a pale blue spot. When adrenalin was applied to one horn of the uterus but not to the other, the former on incision hardly bled at all, while the latter did so freely. Adrenalin may therefore be a most beneficial styptic in the separation of adhesions and attachments of various kinds, a proceeding which has frequently been attended with hæmorrhage, serious in amount and difficult to arrest. It seems indeed probable that adrenalin will prove very important in gynaecological and obstetric practice.

HOT AIR IN THE TREATMENT OF SOME AFFECTIONS OF THE GENITAL ORGANS.

SALOM, Vienna (*Wiener kl. Wchs.*, 1904, No. 23), reports upon some trials made in Chrobak's Klinik with an apparatus upon Reitler's system. In some instances the application of hot air had to be abandoned on account of palpitations of the heart, or feelings of extreme anxiety. As the physiological effect of the very high temperature of the air employed, the local temperature after application rose above 40° , while the general temperature of the body was increased by several tenths, or even more. The blood pressure was considerably diminished, but the chief effect of the treatment was the hyperidrosis and hyperæmia it induced, and the way in which it relieved pain. Among the fifty-seven cases treated there were many of parametritis, and as the case histories given show, the results even in large and very painful exudations were sometimes very good; in the acute stages of adnexal swellings they were unfavourable, but in

the subacute and chronic cases of this kind were sometimes good. Inflammatory processes in the peritoneum were for the most part improved. On the whole the method has much to recommend it.

ISCHURIA IN RETROFLEXED GRAVID UTERUS.

REED (*Amer. Jour. Obst.*, February, 1904) says that retention of urine in retroflexion of the gravid uterus is not due to direct compression of the urethra, or neck of the bladder, whereby the lumen is mechanically closed, but that it must be regarded as a form of "pressure paralysis," due to interference with the nerves supplying the bladder in some part of their course. Compression of the principal motor nerve (pelvic nerve) is the most common source of retention. The part most subject to pressure is the pelvic ganglion lying near the great cervical ganglion of the uterus, although the nerve may be affected in any part of its course, either near its distribution to the bladder, or close to the sacral exit of the component fibres. Compression of the sensory nerves, either in the course of the nerve or peripherally (in the bladder), may also rarely produce retention. Both afferent and efferent filaments may be affected simultaneously in a given case of retention, but the order is usually consecutive. Pathological conditions of the pelvis and abdomen which irritate the sensory fibres of the bladder produce the so-called "irritable bladder." Retention of urine *post-partum* and after laparotomy for tumours, is due to diminished intra-abdominal pressure, weakness of the abdominal muscles from over-distension, and the dorsal decubitus.

J. F. J.

ON THE ACTION OF CAUSTICS ON THE LIVING ENDOMETRIUM, A CONTRIBUTION TO THE TREATMENT OF ENDOMETRITIS.

RIELANDER, Marburg (*Zeitschr. f. Geb. u. Gyn.*, Bd. li., Heft. 3), concludes, from experimental researches, that in the use of intrauterine caustics an alcoholic preparation of the drug is to be preferred to a watery one, because it more easily finds its way over the surface, probably also into the substance of the tissues. By employing Playfair's sound, armed with drugs dissolved in alcohol, one can secure a uniform and sufficiently deep cauterisation over the whole of the uterine mucosa; the same is true of soluble

medicated pessaries, so that Braun's syringe is superfluous. The reticular texture of the uterine mucosa makes it easy of penetration by the caustic material, while the compact muscular fibres resist the entrance of the drug. The penetration of a watery solution into the mucosa is a gradual process, that of an alcoholic one very quick (the tissues, in the former case, being much changed, in the latter, promptly fixed). When a 30 per cent. formalin solution is used, the burnt cicatrix begins to be cast off within twenty-four hours and the regeneration of the mucosa can commence. If Playfair's sound be employed the caustic does not affect even the uterine end of the tube.

INTRAPERITONEAL SHORTENING OF THE ROUND LIGAMENTS, USING CATGUT ONLY FOR FIXATION SUTURES.

MENGE, Leipzig (*Zentralb. f. Gyn.*, 1904, No. 21), considers every backward displacement of the uterus to be pathological, and that therefore in certain cases operative treatment is the right one. His method of ventrofixation, which in 130 cases has invariably been successful, consists in stitching the sling made by intraperitoneal shortening of the round ligaments to the abdominal wall at the level of the insertion of the ligaments into the uterus, using catgut only for the stitches.

VENTRAL AND VAGINAL FIXATION IN CHILD-BEARING AGE.

v. GUÉRARD, Duesseldorf (*Monats. f. Geb. u. Gyn.*, Bd. xix., S. 229), is convinced that no interference with labour need be expected from either ventral or vaginal fixation properly carried out.

In 57 labours after ventral fixation, there was no difficulty in 51, forceps were applied in 5. The fixation had been made supplementary to other operations in 49 instances, and retroflexion had recurred in 2.

In 41 labours after vaginal fixation, there was no difficulty in delivery in 39; the low forceps was used in 4; nor was there any disturbance during pregnancy. Retroflexion recurred in one instance. The fixation was made with two silk threads inserted somewhat below the mid-point between the insertions of the tubes and that of the peritoneum, and the stitches were removed after fourteen days. There were seven abortions after vaginal fixation.

ABDOMINAL SURGERY.

CLARK (*Amer. Jour. Obst.*, May, 1904), in referring to the diagnosis of abdominal conditions, says that to give the patients every possible benefit from the abdominal incision, all parts of the abdomen should be manually explored in almost all cases in which the symptoms are not fully explained by the pathological condition for which the operation is done. The exploration must be thorough, with special attention to the appendix, kidneys, gall-bladder, pancreas and gastro-intestinal tract. However, when the operation in the pelvis has been attended with the evacuation of pus, which if generally distributed in the peritoneal cavity might give rise to a peritonitis, this exploration should be omitted; as also in cases which are in a critical condition at the termination of the operation. Again, when the clinical symptoms are clear cut and point definitely to a single condition, for which alone the operation is performed, the exploration should be omitted. Clark gives his opinions on the following debatable points.

(1) Should the normal appendix be removed as a coincident part of all pelvic operations? With intelligent patients the question of its removal must be left to their decision.

(2) Should gall-stones, if discovered in the course of another operation, be removed? In every case, unless the patient's condition is a contraindication to any further operation, gall-stones, even though they have not produced symptoms, should be removed.

(3) If the right kidney has a range of mobility from 2 to 6 centimetres, under which circumstances most of them may easily be palpated, what set of symptoms are sufficiently pathognomonic of a pathological mobility to indicate nephrorrhaphy? The kidney should only be suspended when the symptoms point directly to the kidney as the cause of trouble. In my experience the percentage of these cases is not more than one in 150 cases.

(4) What degree of descensus of the stomach and transverse colon require operative measures for their restoration? If the transverse colon is situated at the brim of the pelvis, and the lower curvature of the stomach is below the umbilicus, this organ should be replaced and held in position by stitching the gastrocolonic omentum in a transverse line across the upper portion of the abdomen.

(5) Is any group of symptoms significant of sigmoid-ptosis? As to this he is in doubt, but he believes that the cases of fixed aching pain at the brim of the pelvis, associated with obstinate constipation, in the absence of pelvic lesion, are strongly significant of this condition.

(6) Should sigmoidpexy be performed for these? In the more exaggerated cases it offers a hope of correcting the dislocation and relieving the symptoms.

J. F. J.

SUPRAVAGINAL AMPUTATION FOR FIBROID TUMOURS.

HAYD (*Amer. Jour. Obst.*, January, 1904) reports fourteen cases of this operation, with one death. The death was due to peritonitis from leaking of urine through a small hole which had been torn in the bladder wall and which had been sutured. He only advocates complete removal of the uterus, *i.e.*, including the cervix, in cases where the cervix is the seat of marked cystic degeneration, or has a bad tear, or is associated with considerable vaginal prolapse, or where, for any reason, drainage would be desirable. He points out the danger of over-conservatism in the treatment of uterine fibroids. He condemns electricity, ligation of the uterine arteries, and removal of the appendages.

J. F. J.

DYSTOCIA DUE TO A MYOMA: SPONTANEOUS DELIVERY.

CALDERINI (*Archivis Ost. Gin.*, 1904, No. 2) reports: In a primipara in labour at term, progress was delayed by a large myoma situated in the pelvis. The fœtus had been dead for four days, but was not putrefied. Immediate intervention was impossible owing to the circumstances of the case, and delivery ultimately took place spontaneously. Various factors contributed to the completion of the birth; the pressure made upon the tumour by the explorer, good and forcible uterine contractions, the death of the fœtus, and consequent softening of its head, which was, therefore, able to engage in the narrow space of the os uteri. Observations made during the labour and puerperium proved the tumour to be a subserous myoma. The woman left the klinik in good health thirteen days after delivery; the only sequela was

a thrombosis of the left leg after she returned home, and from which she recovered.

INVASION OF A FIBROMYOMA BY AN ADENOCARCINOMA.

C. P. NOBLE (*Amer. Jour. Obst.*, March, 1904), reports a unique case of the invasion of a fibroid tumour of the uterus by an adenocarcinoma, which by metaplasia had assumed the appearance of a squamous-celled carcinoma. The patient, aged 63, had passed the menopause at the age of 45, and for nine months had had some vesical trouble and a leucorrhœal discharge, which for a few weeks had been blood-stained. The cervix felt normal, the body of the uterus was enlarged and irregular in shape. Supravaginal hysterectomy was performed. Nothing abnormal was apparent to the eye except a degenerating fibroid which was connected with the inner wall of the uterus by a pedicle. On section, the tumour was of a uniform greyish-white colour, smooth, glistening and of a dense consistence, with here and there a few opaque greyish-yellow patches suggesting fatty degeneration. Under the microscope it was found that the smooth muscle had been replaced largely by connective tissue. Throughout were numerous masses of epithelium of the epidermoid type, in the centre of which there was a tendency to form epithelial pearls. The surface of the tumour was covered with thin squamous epithelium, which in places extended as a papillary growth into the interior of the tumour. The epithelial masses in the tumour must have arisen either from : (a) metastases from tumour in other parts of the body—there was no evidence of such tumour ; (b) extension to myoma of cancer of the uterus—there was no evidence to show that they could have arisen from glandular elements contained within the tumour ; (c) the development of the cancerous tumour from the epithelium covering it—in favour of this it was noted that where the tumour was in contact with the uterine wall, its outer surface was covered by a growth of cylindrical cells in distinctly tubular or adenomatous arrangement. From this point papillary-like processes, lined by the same type of cell, extended into the loose texture of the tumour and formed for themselves lymphatic-like spaces ; as they extended more deeply into the tumour they lost their cylindrical form, and became of the pavement-cell type. All stages could be traced, from typical cylindrical cells to

masses of flat pavement cells, with a tendency to form epithelial pearls. It is probable that the character of the epithelial cells was due to an ingrowth of glands from the surface, and that these had undergone a metaplasia due to the limitation of the growth offered by the surrounding tissues. The cervix, perfectly normal as far as could be ascertained, was not subsequently removed, and the patient made a good recovery.

J. F. J.

ABDOMINAL *versus* VAGINAL HYSTERECTOMY.

DEAVER (*Amer. Jour. Obst.*, January, 1904) opposes vaginal hysterectomy for carcinoma of the cervix uteri, except in the presence of obstacles necessitating such a course, such as a stout abdomen, nephritis, or old age. He does a complete hysterectomy by the abdominal route in fundal as well as in cervical carcinoma, and holds that the abdominal operation offers an increased space for necessary manipulation, greater security against hæmorrhage and less risk of injuring the ureters. It is easier to keep beyond the area of diseased tissue; a larger portion of the broad ligaments together with their lymph channels can be excised and glandular enlargements removed. In his operations for cancer of the cervix, the cancer area is curetted and cauterised with pure carbolic acid, and if necessary the cervix is sewn tightly to prevent oozing. Gauze drainage is introduced into the vagina from above downwards and projects slightly into the pelvis, where the anterior peritoneal flap is brought over it and stitched to the posterior wall of the vagina. The area of drainage is thus extra-peritoneal.

J. F. J.

UTERINE CANCER STATISTICS.

BESSON (*Źl. Sci. Med.*, Lille, June 11 and 18, 1904) records 173 cases of uterine cancer treated in La Charité Hospital, by Professor Duret from 1890 to 1903 inclusive, and forming 6 per cent. of the total number of women admitted into that hospital. Their ages varied between 25 and 76, with a maximum frequency between 40 and 50. Of the 173 cases 104 were inoperable at the time of their admission; 69 were operated on, 46 by vaginal hysterectomy, with a mortality of 15 per cent., and 23 by abdominal hysterectomy, with a mortality of 43.4 per cent. In 123

of the cases the disease was precisely localised; 94 were cervical and 29 corporeal cancers. Of the 53 who survived operation 9 were lost sight of; of the remaining 44, 22, or 50 per cent., died within a year, and 15, or about 38 per cent., survived more than two years. Of these 15, 3 died from relapse after between two and three years, 3 between three and four years, 1 after seven years, 1 after eight years. The other 7 had remained without recurrence of the disease for twenty-seven, thirty-one, thirty-seven months, and five, six and a quarter, seven and five years respectively, since the operation.

From the study of these cases and of the work of other operators, Besson formulates the following conclusions: (1) Uterine cancer may occur at a very early period of a woman's life; it is therefore of the utmost importance to examine any woman suffering from leucorrhœa, in order to ensure timely intervention in cases of developing cancer; (2) the mortality at present in cases operated upon is two or three times greater after total abdominal hysterectomy than after vaginal hysterectomy; (3) the proportion of 38 per cent. of survivals in operated cases after two years appears encouraging; (4) the greater proportion of survivals in cases operated on by vaginal hysterectomy, indicates the corresponding superiority of this operation in cancers sufficiently localised; (5) total abdominal hysterectomy has, therefore, a more restricted, but yet a positive, indication in cases of extensive propagation of the disease, provided the general health of the patient is in a satisfactory condition; (6) in advanced cases, with break-down of the general health, all intervention should be avoided, and palliative means only resorted to

P. Z. H.

TUBERCULOSIS OF THE FEMALE GENITALIA.

MURPHY (*Amer. Jour. Obst.*, January and February, 1904) says that after tuberculosis of the tubes, tuberculosis of the fundus uteri is most frequent. The uterine lesion is usually secondary to the tubal, and therefore that part of the fundus about the orifices of the tubes is most often invaded. The tubercular process may be of three varieties: miliary, ulcerative, and pyometra (mixed infection). The ulcerative form may occlude the cervix and lead to hydro-metra and pyometra. Owing to the uterine changes incident to menstruation, infection of the uterus is less likely

than of the tubes, as shown by the fact that uterine tuberculosis is most frequent before puberty and after the menopause. The tubercular processes may extend deeply into the muscular wall of the uterus, leaving only a thin sac filled with thick pus and caseous material. There may be very slight enlargement of the uterus or none at all. If pregnancy occurs in a tuberculous uterus, it may go on to full term, but from the softening of the walls there is always danger of rupture occurring. The symptoms are usually those of ordinary endometritis. Menstruation may be regular, suppressed or profuse. Leucorrhœa is the rule. The diagnosis can only be cleared up by an examination of the uterine scrapings. The profuse and intractable leucorrhœa of both extremities of life is very frequently due to tuberculosis of the uterine fundus. Removal of the uterus, and of the appendages at the same time, is necessary except in children, for whom curetting should be done and hysterectomy be only a last resource.

The Fallopian tubes are predisposed to tuberculosis by their spiral form and pleated mucosa, which favour stagnation of secretions. A preliminary catarrh enhances the dangers of infection. The sources of infection are, from the peritoneum, through the blood or lymph vessels, and from outside the body. The tubes may be infected without the peritoneum or the latter without the former, though in the author's experience in cases of tubercular peritonitis in which the fimbriated end of the tube was free, tuberculosis of the tube was very rarely absent. Experiments upon monkeys, detailed in full, showed that the disease is transferred from the peritoneum to the tubes, and also that tubercular infection occurring in any portion of the abdominal cavity, tends to a more exaggerated expression in the pelvic peritoneum; that the retroperitoneal glands of the pelvis and the post-peritoneal glands in the lumbar region were the only ones involved; that the tubercular infection does not, in the monkey, invade the tubal mucosa, since the fimbriated ends become closed and shut off the passage, but that it invades the walls from the peritoneum.

The symptoms of tubal tuberculosis are those of salpingitis with repeated pelvic peritonitis. Pain is frequent, periodical and localised. There is a slight evening rise of temperature. The periodical pelvic peritonitis is due to the expulsion of tubercular *débris* from the tubes into the peritoneum. Menstruation is, as a rule, regular and not painful.

Sterility is the rule. The tubes must be completely extirpated. The ovary is not usually deeply involved, and if possible one or part of one ovary should be saved.

Tuberculosis of the ovary is extremely seldom primary, but generally secondary and likely to occur in acute miliary tuberculosis of the lungs. The most frequent source of infection is the peritoneum and tubes. The disease begins as a perioöphoritis and the deeper portions become infected through the lymphatics. In one case Murphy operated upon, the communication to the ovary was by direct perforation of the tubal wall. Ovarian tuberculosis may be miliary, caseous or tubercular abscess. The symptoms are those of the tubal or peritoneal disease from which it originates, and the diseased ovary will be removed with the diseased tube, or during the treatment of tubercular peritonitis. Tuberculous Graafian follicles can be shelled out from the ovaries in young individuals and the rent sutured up.

Tuberculosis of the peritoneum is more frequent in females than in males. It is frequently difficult or impossible to determine the route by which the bacilli reach the peritoneum. The most frequent source is the intestine. The bacilli may attack the intestine first and the peritoneum next, or, absorbed by the superficial lymphatics of the intestinal mucosa, may attack the peritoneum primarily. From the pathological standpoint there are four varieties: (1) disseminated, miliary, serous (ascitic); (2) nodular, ulcerative, or perforative (the least frequent); (3) adhesive, fibro-plastic or obliterative; (4) suppurative (or general mixed infection). The symptoms vary greatly in the different types of the disease. In the disseminated ascitic variety the attacks resemble recurrent peritonitis of appendiceal origin, except that the field of activity is the pelvis instead of the right iliac fossa. The attacks are not necessarily associated with menstruation, being due to the periodic discharge of tubercular material from the tubes. There is pronounced leucocytosis. Between the attacks the remission is not complete; there is continued hypersensitiveness of the pelvic peritoneum. In the nodular, perforative variety, the whole force of the process is concentrated into small areas. The symptoms take no definite form, there is no periodicity to the attacks and the diagnosis cannot be definitely made except by exploratory incision. In the adhesive obliterative variety there is destruction of

the endothelial lining of the peritoneum and production of connective tissue of varying degrees of density. Circumscribed cysts are formed. These may become infected from the bowel and suppurate. The ends of the tube, open or sealed, communicate with one of these cyst or pus cavities. The peritoneum is usually thickened and resembles wet leather. The symptoms are those of continued inflammation with little septic intoxication. There is little elevation of temperature except when a circumscribed mixed infection occurs. Leucocytosis is not pronounced. Emaciation is progressive but not rapid. The clinical course resembles that of combined tubal infection and ovarian cyst with pericyclic inflammation. To any of these tubercular conditions an infective process may be added in which the virulence of infection plays a very important rôle, both in the pathological changes and in the symptomatic manifestations. The tendency is to circumscription of the process. The fimbriated ends of the tube become closed or fixed to a neighbouring structure or terminate in a circumscribed abscess. Whenever the fimbriated end of the tube is sealed it may be taken that there has been a mixed infection, and that there will be exacerbations of the inflammation mimicking the exacerbations of specific pyosalpinx. Encysted collections of fluid will suppurate and form abscesses. If the infection be virulent there will be chills, elevation of temperature, hectic diarrhœa and rapid emaciation. The wall of the abscess may necrose and the contents escape into the bowel, bladder, vagina or through the skin. The prognosis in these cases is bad, recovery being rare. The chief things in treatment are to suppress the tubal lesion, which is the starting point, to cut off the supply of new tubercular *débris* and to avoid mixed infection. Abdominal section, followed by removal of the tubes if possible, evacuation of the ascitic fluid and tubular drainage are indicated. If the infection be tubercular only and not mixed, there is a good prospect of a cure. All operative treatment should be followed by systemic treatment of an antitubercular nature.

J. F. J.

ACTINOMYCOSIS OF BOTH OVARIES.

GELDNER, Breslau (*Monats. f. Geb. u. Gyn.*, Bd. xviii., S. 693), reports a case of actinomycosis affecting both ovaries, and confined to them. The ovarian tissue was

throughout beset with actinomycosis. The infection of one ovary apparently took place through a fistula from a tuberculous hip joint, extending to the neighbourhood of Douglas' pouch: but the disease of the other ovary must be considered a metastasis.

OVARIAN HÆMORRHAGE.

BUERGER (*Zeitschr. f. Geb. u. Gyn.*, Bd. li., Heft 2) reports a case of a very hard-working woman, aged 31, who was admitted into hospital with symptoms of internal hæmorrhage. On abdominal section the source of the bleeding was found to be in the ovary, which was removed, and the woman recovered. The substance of the ovary was crowded with luteum cysts, and the walls of some of these were extremely thin. Under the influence of menstrual hyperæmia these cysts had become distended with blood and then ruptured.

A PRIMARY OVARIAN TUMOUR OF KRUKENBERG'S TYPE.

SCHENK, Prague (*Zeitschr. f. Geb. u. Gyn.*, Bd. li., Hft. 2), reports the second instance in which a tumour of the Krukenberg type has been a primary ovarian growth; the first was described by Krukenberg himself, and all other published cases of this form of new growth have been secondary. The chief characteristic of these solid and generally bilateral tumours of the ovary consists in settlement of large, round, distended cells in the fine spaces between the fibres of the connective tissue (v. *ante*, vol. xviii., p. 82. The primary tumour is generally a gastric scirrhus).

ON THYROID TISSUE IN OVARIAN EMBRYOMATA.

POLANO (*Muenchener med. Wchns.*, 1904, No. 1) reported to the Wuerzburg Physico-Medical Society, on December 3, 1903, the case of a woman of 56, who in the beginning of 1903 was operated on for ascites and a tumour of the right ovary. The tumour removed was the size of a small fist, smooth though somewhat lumpy, and consisted of small cysts. At the pole opposite the hilum of the

ovary there was a fungoid growth, and microscopical examination disclosed three different tissue formations: (1) Normal thyroid gland, (2) a colloid goitre, and (3) a malignant tumour of the thyroid gland. He showed the tumour and microscopical sections.

After reviewing the prevailing theories, and shortly alluding to the mystical views formerly held about embryomata, he mentioned as theories which were open to scientific discussion: (1) Detachment by tying (the axle-string of Hiss, Fraenkel, Bandler, &c.); (2) pathogenesis (Waldeyer, Pfannenstiel, Kockel, &c.); and (3) foetal inclusion (Marchand, Bonnet). The results of the classical work of Wilms were now accepted as histologically correct. As Bonnet had declared, in attempting any theoretical explanation of the origin of these tumours, the principle to be adhered to was: to reject speculative views unsupported by facts, and everything opposed to phenomena which are proved to be in accordance with the biological laws of the animal world. This criticism, in the opinion of most pathologists and anatomists—Wilms especially included—applies to all the theories hitherto propounded except that of Marchand and Bonnet.

Polano then traced the two-fold development of this theory, which had resulted from the publication of complicated and more simple formations.

Among the former are two cases of chorion-epitheliomatous formations in embryomata of the testicle, published by Schlagenhauser and Steinert, to which Marchand and Schmorl have lent their authority. These cases fulfilled Bonnet's theoretical postulate for the presence of embryonal membranes, and furnished a proof, in Polano's opinion absolutely unanswerable, of the foetal origin of the syncytium. It seems possible that in typical embryomata of the testicle and ovary the amnion also may be concerned.

The Bidermone and this Wuerzburg case may be cited as instances of the simpler forms; for though one cannot, as in the cases of Robert Meyer, Kretschmer and Glockner, point to small bones or nodes of cartilage (though, as in Saxerschen's case, in which a tooth was found in an ovary, such may have existed), we must suppose either that a very highly differentiated blastomere went astray, or that the other derivatives or the fold have been suppressed

(e.g., dissolution of bone in Meyer's case). In accordance with the hypothesis first laid down by Pick, there is no room for doubt as to the embryonal character of tumours of this kind.

In regard to the malignant degeneration affecting part of this tumour, clinically it is remarkable that, according to recent examination, this patient was found to be quite well and had no ascites.

OVARIAN DERMOID, WITH A PAPILLOMATOUS OUTGROWTH PERFORATING THE BLADDER.

MUENCH (*Thesis*, Tuebingen, *Zentralb. f. Gyn.*, 1904, No. 7) relates the following case. A woman of 51 was sent into the medical klinik moribund. She had suffered from urinary troubles and persistent pain in the bladder for twelve months, and, moreover, complained of cardiac palpitation and dropsy. The *post-mortem* examination revealed: Mitral stenosis, general cardiac hypertrophy, thrombosis of the left auricle, thrombosis of both femoral veins, pulmonary embolism, &c. There was also a dermoid of the left ovary about the size of a hen's egg, and a papillomatous excrescence from the cyst had perforated the wall of the bladder. The outgrowth had the form and size of a raspberry, and had broken through the posterior vesical wall a little to the left of the middle line.

DERMOID CYSTS OF BOTH OVARIES AND PREGNANCY.

CONDAMIN (*Ann. Gyn. Obst*, March, 1904), in connection with a case in which he removed bilateral dermoid ovarian cysts from a woman aged 36, who had had five normal pregnancies, reviews 97 cases of bilateral dermoids, collected by Loewy and Guéniot. Menstruation, when referred to, in these is said to have been normal or nearly so, except in some instances in which excessive size of the cysts or torsion of the pedicle had modified the ovarian vitality. Pregnancy has been recorded in 30 of the 98 cases; many of these patients were multiparæ, 9 were from one to five months' gravid at the time of the operation, and 4 in whom part of an ovary was preserved at the operation afterwards conceived. In conclusion, he recommends that in extirpating bilateral ovarian dermoids in women under 40, an

operator should, if possible, aim at preserving a portion of an ovary and the corresponding tube, even if they have been altered by compression, with the double object of retaining the menstrual activity and the possibility of conception. In view of the possible danger of recurrent disease, many gynæcologists would, for the sake of ensuring greater safety to the patient, prefer to make the sacrifice.

P. Z. H.

SUPPURATION OF AN OVARIAN CYST AFTER ENTERIC FEVER.

ZANTSCHENKO, Kasan (*Monats. f. Geb. u. Gyn.*, Bd. xix., S. 67), reports a case of extirpation, eight months after recovery from typhoid fever, of an ovarian cyst, which during that interval had enlarged and suppurated. Examination of the contents for micro-organisms, and the cultures obtained thereby, proved that the infection of the cyst was entirely due to the typhoid bacillus, and had occurred through the blood-vessels at the time of the fever. The tumour originally was a pseudo-mucous ovarian cyst, and suppuration of such has not been previously recorded.

THE FUNCTION OF THE CORPUS LUTEUM.

FRAENKEL (*Archiv f. Gyn.*, Bd. lxxviii., Heft 2), in an important article based upon a series of researches on rabbits, and upon what is known of human physiology, comes to the following conclusions :

The differentiation of the corpus luteum "verum" from the corpus luteum "spurium" cannot be justified either by their histology or function, and must be abandoned. The corpus luteum, which in the human being is formed every four weeks, in animals at relatively regular intervals, is a gland whose primary function is always the same, to furnish periodically an impulse to the nourishment of the uterus, whereby it is prevented from sinking back into its infantile, or prematurely acquiring its senile, condition, and also whereby it is enabled to make its mucous membrane ready for the reception of a fertilised ovum. Should an ovum be fertilised, the function of the corpus luteum for a time still remains the same in principle, namely, to preside over the increased nourishment required

by the uterus for the implantation and development of the ovum. Should conception not occur, the corpus luteum induces a hyperæmia leading to menstruation, and thereupon to its own involution. The theoretic ideas of Pflueger and Loewenhardt, upon the connection of ovulation with menstruation, yield to the new law now demonstrated, which is to the following effect: "The cause of menstruation is the secretory activity of the corpus luteum."

It is then the activity of the corpus luteum, and not the pressure of the enlarging follicle on the ovarian nerves, that induces menstruation: for periodically every four weeks this activity leads to uterine hyperæmia, followed either by pregnancy or by menstruation.

The ovary may be considered generally to be one of the most sensitive reagents in the human body. One evidence of this is that if an increase in nourishing fluids is wanted owing to increased excretion, either morbid (*e.g.*, diabetes), or physiological (*e.g.*, suckling), or to its being perverted, and accumulating in improper form (fat) in the wrong place, then until compensation is established, the maturation of the ovum and the formation of the corpus luteum is omitted, and thereby atrophy of the uterus and amenorrhœa are induced.

It is evident that the therapeutic influence of the modern remedy oöphorin, or ovarin, entirely depends upon the presence and amount of corpus luteum substance it contains. In the cow the corpus luteum attains the size of a walnut, occupying two-thirds of the volume of the ovary. From it the corpus luteum substance, called by Fraenkel "lutein," is easily obtained. By the administration, three times daily, of 0.3 grammes of this substance, all omission symptoms can be relieved with absolute certainty, but this new and improved preparation is not any more than oöphorin a specific, but from the nature of the thing the cure is merely symptomatic.

The importance of the corpora lutea being now at last fully recognised, Fraenkel urges that the corpus luteum should be preserved intact as long as possible during the corresponding pregnancy. On the ground of the greatly improved technique it has become the custom to perform ovariectomy during pregnancy. It has, however, been noticed, and this previously unknown circumstance has

seemed inexplicable, that even in cases unattended by the slightest trouble, from some unknown cause abortion took place. For this reason, indeed, Tsrine suggested that no pregnant woman should be submitted to ovariectomy before the fourth month, because from that time the danger of abortion is not so great. Fraenkel now gives us the explanation so long lacking, and advises his operating colleagues to more cautious proceedings. If the tumour be small and give little trouble, is enlarging slowly or not at all, and does not seriously threaten the pregnancy or labour, it is better to defer operation till after delivery; if, however, the tumour constitutes a danger, one should, if possible, postpone the operation till after the fourth month, and in any case endeavour to operate in such a way as to leave the corpus luteum intact, and with the technique in resection of the ovaries now acquired, there is generally no difficulty in doing so.

RIES (*Amer. Jour. Obst.*, February, 1904) reports a case bearing on the question raised Fraenkel. by The patient menstruated on September 26, and was operated upon on October 25 following. A corpus luteum, from which profuse hæmorrhage had taken place, was completely enucleated and the edges of the ovarian tissue sutured together. Forty-eight hours after the operation menstruation occurred, lasted the usual time and was of the usual amount. It is possible that the extirpation was performed too near the term of the expected menstruation to affect it, enough of the hypothetical internal secretion having already been produced.

J. F. J.

HYDATID MOLE AND OVARY, A CONTRIBUTION TO THE PATHOLOGY OF THE CORPUS LUTEUM.

JAFFÉ, Berlin (*Archiv f. Gyn.*, Bd. lxx., S. 462), reports a case from Landau's klinik, in which a radical vaginal operation was performed for hydatid molar pregnancy. Clinically, it appeared to be chorion-epithelioma malignum. The woman was cured. Both ovaries contained a number of corpus luteum cysts. Jaffé then proceeds to discuss in detail and defend the theory according to which, in cases

of hydatid mole, primary over-production of lutein tissue sets up in the ovum, in the uterus or tube, an excessive activity of the chorionic epithelium which is the cause of the formation of the hydatid mole.

HYDATID MOLE AND TWIN NORMAL OVUM. DISPLACEMENT OF LUTEIN CELLS IN ONE OVARY.

BIRNBAUM, Goettingen (*Monats f. Geb. u. Gyn.*, Bd. xix., S. 175), reports a case of a twin pregnancy in which, at the end of the sixth month, while one ovum was normally developed the other had degenerated into forming an hydatid mole. There was neither endometritis nor any systemic disease originally. Nephritis came on after conception, and the woman died six weeks after delivery from myocarditis.

In one of her ovaries there was a displacement of lutein cells, due to an offset of lutein lamellæ from a corpus luteum. To this condition an important rôle in the etiology of hydatid moles has been ascribed by Pick.

CONSERVATIVE TREATMENT OF THE UTERINE ADNEXA.

CLARKE (*Amer. Jour. Obst.*, January, 1904) reports several cases. In one case the outer half of the right Fallopian tube was involved in tubercular disease; he removed that part alone and left the inner half of the tube patent by a salpingostomy. In another the appendix was adherent to a small ovarian cyst, only the cyst and appendix were removed, part of the ovary being retained. The patient subsequently married and had a child. Other cases of resection of the ovaries are reported, also seven cases of the conservative treatment of inflammatory conditions of the appendages. In cases of small pyosalpinx the tube was disinfected by sterilised water and then by mild sublimate solution. Pregnancy occurred subsequently in the first case. The results, on the whole, have been excellent.

J. F. J.

THE ORIGIN OF TUBAL OCCLUSION.

CHIARABBA (*Archivio Ost. Gin.*, 1904, No. 2) takes a rapid survey of the more usual results of chronic salpingitis (retraction of the tubes, stenosis, atresia), and of the complications more easily recognised, and proceeds

to a more detailed study of the histopathology and of the mechanism of the formation of stenosis, which he illustrates by the conditions in a case cured by Lawson Tait's operation. After describing the clinical course and curative process of the case, he concludes that an inflammatory process originating in the mucosa and extending along the other tissues towards the abdominal os, must have caused the shedding of epithelium which remained enveloped in an inflammatory membrane. After various phases this membrane ultimately formed adhesions and, so to say, cemented together the muscular fibres, which in themselves were not factors in the stenosis.

In regard to the epithelial tissue met with in the midst of the connective tissue, Chiarabba believes that it was derived from remains of the mucous investment of the edge of one of the fimbriæ, which became enclosed in the new tissue, and continued to develop its vital action without taking part in the formation of the cicatrix.

FLECK, Goettingen (*Archiv f. Gyn.*, Bd. lxxi., S. 411), attributes the occlusion of the tube in gynatretic hydrosalpinx to the formation of adhesions around its distal extremity, and the formation of these adhesions to the escape of menstrual blood irritating the peritoneum. The influence of bacteria is not necessary.

AN EARLY OPERATION FOR HÆMATOMETRA, WITH ACCOMPANYING HÆMATOSALPINX, IN THE RUDIMENTARY HORN OF A UTERUS BICORNIS.

PROCHOWNICK (*Muenchener med. Wchns.*, 1904, February 2) exhibited to the Hamburg Medical Society in December a specimen removed earlier than any other of the kind yet published. The patient, scarcely 15 years old, had begun to menstruate four months before the operation, and for that time had been constantly losing some blood, but had not suffered any pain until the last three days. The child was poorly developed, absolutely intact, never having been even examined. She had always been healthy. On examination per rectum the diagnosis lay between a tumour of the right ovary, incarcerated or twisted on its axis, on the one hand, and an anomaly of development on the other. When the abdomen had been

opened by Pfannenstiel's incision, it was at once found that there was neither any accumulation of blood or other fluid in the peritoneal cavity, nor any appearance of inflammation on the parietal or visceral serosa. The genital organs were in no way adherent, and were easily lifted up into the abdominal wound, and on the left side were normal. The left horn of the uterus was continued into a normal cervix and normal vagina; the tube was slightly serpentine, but otherwise regularly formed, open, unthickened, and free from any irritation; the ovary, plumper than the right one and like that of a mature virgin, contained a recently ruptured follicle. The right rudimentary horn, clearly indicated by the round ligament, was the size of a large walnut, firmly elastic (filled with blood), and apparently quite unconnected with the left horn; the tube passing from it at first slender, then slightly distended with blood, finally made a series of four twists, to nearly 180° about its axis, each loop of which from the uterus outwards was longer and more distended by blood than the preceding one; these twists were not folded one on the other, but were nevertheless, together with their ligamentary attachment, sharply bent away from one another; their entire length when stretched out amounted to from 28 to 30 cm. The contained bloody fluid was bright red. The end of the tube was not of the common post-horn shape, but swollen into a knob, and from the knob a fine cord extended for 3 cm. to finish in a completely open ostium, with a typical pavilion. Just before the fimbriated extremity a fine process passed off to the right, typically childish, smooth, cylindrical ovary, and must be supposed to be the fimbria ovarica. Whether the apparently open extremity of the tube was not an accessory oviduct is a question to be decided by the histological examination.

Even as it was, the specimen certainly proved that in this case the formation of the hæmatosalpinx was entirely the result of mechanical causes, without any inflammatory or infectious processes.

ADNEXAL DISEASE AND APPENDICITIS.

SUNKLE (*Cleveland Med. Journ.*, 1904, No. 2) declares that in many cases operated upon for appendicitis the

appendix is found to be perfectly normal, the symptoms having been due to disease of the ovary and tube. Thus Legueu reports two cases of extrauterine pregnancy, one in a patient aged 48, diagnosed by him as appendicitis. In neither case had there been any menstrual irregularity, uterine hæmorrhage, or the usual signs of pregnancy, and both cases were feverish. Downes tells of the removal of the appendix from two women by a general surgeon, without any relief; in each case the removal of an ovary containing pus effected a cure. Lusk relates a case diagnosed by an eminent surgeon as appendicitis, and in which all who examined the case thought they felt the thickened appendix; there was no history of missing a period, but a tubal pregnancy was found at the operation. Richelot mentions six cases in which it was impossible to make a positive diagnosis before opening the abdomen. In fact, the differential diagnosis between appendicitis and tubo-ovarian disease, while generally simple, is not infrequently almost impossible, especially when the signs are misleading, or when a vaginal examination without anæsthesia does not reveal any trouble. Morris lays much stress on rigidity of the abdomen as a differential sign. The situation of the pain is undoubtedly of value; in chronic inflammation of the appendix it is most felt on pressure over McBurney's point; in tubo-ovarian disease the most tender spot is lower down in the ovarian region or in the vagina. Nausea, gastric and intestinal troubles, or an intact hymen, point towards appendicitis; disordered genital functions or fixity of the uterus suggest tubo-ovarian disease.

In about one case in ten the ligament of Clado is present, extending from the meso-appendix to the right ovary; it contains a small branch from the ovarian artery and a chain of lymphatics, and may thus form a road for infection between the adnexa and appendix. But even when this is not present, close proximity may cause extension of an inflammation from one to the other. It is often impossible to tell which was the seat of the primary disorder; but the colon bacillus or gonococcus might, if present, decide the point.

Providing that time and the safety of the patient permit it, the appendix, if it exhibits any deviation from

the normal, should be removed at any gynæcological cœliotomy. Indeed, the time seems not far distant when it will be the rule to do this in every laparotomy.

EXTRAUTERINE MIGRATION OF THE OVUM IN ECTOPIC GESTATION.

WORRALL, Sydney (*Australian Med. Gaz.*, 1904, No. 3), reports upon the situation of the corpus luteum in four cases of ectopic pregnancy. In none of the four was there any corpus luteum in the ovary of the same side as the pregnancy; in two instances the corpus luteum was found in the ovary on the opposite side, and in the other two it must be supposed to have been there; so that in all four instances the ovum must have reached the tube by migration either through or external to the uterus. As in the last case the fimbriated end of the tube corresponding to the corpus luteum was occluded, Worrall considers that the migration of the ovum must have been extrauterine.

CRIPPS and WILLIAMSON (*B. M. J.*, 1904, i., p. 711) report a case of tubal gestation after complete removal of the ovary on the same side. Also (*ibid.*, p. 712) cases quoted from Kuestner and Howard Kelly.

INTERSTITIAL PREGNANCY.

WEINBRENNER, Magdeburg (*Zeitschr. f. Geb. u. Gyn.*, Bd. li., Hft. 1), has collected thirty-five cases of interstitial pregnancy, which are not, as others published, open to objection, and supplements them with two further cases from Thorn's practice, in both of which, after abdominal section, the gestation sac was excised from the fundus, and the wound in the uterus stitched up with catgut. In the first case the ovum had developed for from one to two months in the uterine end and the whole of the interstitial part of the tube, and had thrust apart the surrounding muscular fibres. A portion of the pars isthmica tubæ had been dragged into the seat of the ovum. The tumour formed by the implantation of the ovum passed almost imperceptibly into the normal fundus of the very slightly enlarged uterus, the fundus being directed from the left anteriorly backwards to the right. The

tube and ovary projected from the apex of the tumour, the fundus was almost vertical. The patient recovered. Thorn's second case was a true interstitial gestation developed in uterine muscular tissue, neither of the tubes showing any alteration. On the upper and posterior wall of the left uterine horn there was a fluctuating tumour, shaped like a mushroom and invested by loops of intestine and omentum, in the purulent and putrid contents of which lay a macerated four months' foetus. Peritonitis, which led to a fatal result, was present. The first case, according to Kleb's nomenclature, was one of tubo-interstitial gestation; the second one of interstitial gestation proper.

ECTOPIC GESTATION, WITH RETENTION OF THE DEAD FŒTUS BEYOND TERM.

SCHMIDT (I. D., Munich, *Zentralb. f. Gyn.*, 1904, No. 11) reports two cases successfully operated upon in v. Winckel's klinik. In the anamnesis of the first, a woman of 40. there was nothing to suggest extrauterine pregnancy, and the diagnosis made was "multiple myomata," a mistake only discovered at the operation, when the entire sac was removed. In the second, a woman of 37, the diagnosis of ectopic gestation was made before the operation. The foetal sac was so adherent to the intestines that it had to be left and drained through the abdominal wound, and also through the vagina. Both children were beyond term, and were much compressed, almost spherical, with deformed lower extremities (varus). The sac wall contained much hypertrophied muscular tissue, in several places to the thickness of a centimetre, so that the pregnancies must have been tubal.

CONCURRENT TUBAL AND UTERINE PREGNANCY.

WORRALL, Sydney (*Australian Med. Gaz.*, 1904, No. 3), reports the following case: T. E., aged 33, the mother of two children, of whom the youngest was 6 years old, was admitted into the Sydney Hospital on July 20, 1903, complaining of pain in the right inguinal region, which began four weeks ago, was attended with vomiting, and followed in a week by hæmorrhage, which had continued off and on up to her admission. There had been repeated

exacerbations of the pain. She had had two abortions since the birth of her last child, the more recent eighteen months ago. Her menses had been absent for two months previous to the hæmorrhage, and she thought herself pregnant. The uterus was found to be enlarged, and thrust over to the left by a mass felt in the right fornix the size of an orange. A diagnosis of ectopic gestation was made; but the uterus, being curetted under ether, was found to have contained an unruptured ovum of about the fourth or fifth week, and the diagnosis was altered to early uterine pregnancy, complicated by small ovarian cyst. The patient was weakly, and had lost a considerable amount of blood; abdominal section was therefore postponed for a few days, when the tumour was found to be the right Fallopian unruptured, with greatly thickened walls containing an unruptured ovum, in which the fœtus, three-quarters of an inch long, was surrounded by a laminated blood-clot.

Worrall attributes the pain to hæmorrhage into the ovum, and consequent distension of the tube, and also to the escape of some blood from the ostium abdominale into the peritoneal cavity. The patient made a good recovery.

COMBINED ECTOPIC AND INTRAUTERINE PREGNANCY.

F. F. SIMPSON (*Amer. Jour. Obst.*, March, 1904) tabulates 113 reported cases, from a consideration of which he concludes that there is a greater reason for appropriate and timely surgical intervention in compound than in simple ectopic pregnancy. The ectopic pregnancy is a source of grave danger, the ectopic fœtus has rarely been delivered alive and still more rarely has reached maturity. The greatest safety to the mother lies in removing the ectopic products before any complications have occurred. By preference, however, the author defers operation until the patient has recovered from acute anæmia. One case reported was as follows: Patient nulliparous, menstruated December 20, 1902; missed in January; on February 19 had sudden severe pain in the region of the right tube; anæmia; pulse 120 and temperature 103°. There was a tender mass the size of a small cocoanut in her right pelvis and her uterus was slightly enlarged. She was kept at rest and in four weeks her temperature and pulse had become

nearly normal. The uterus was then found more enlarged, with a purple cervix and a globular elastic fundus, and was evidently pregnant. The diagnosis made was combined ectopic and intrauterine pregnancy, and on April 9 a right ectopic pregnancy with a large peritubal hæmatocele was removed by abdominal section. The patient went on well and had a normal confinement on September 12.

J. F. J.

ON IMPREGNATION.

TOFF, Braila (*Zentralb. f. Gyn.*, 1903, No. 14), discusses two points which are of interest in connection with the President's address (*ante*, p. 18). He asks whether for a woman sexual congress is merely a more or less intense nervous excitement, without further and deeper influence on the constitution of her system, and whether during pregnancy the woman's body is just a receptacle to retain, and nourish, and ultimately usher the ovum into the world, without in itself undergoing any other changes in the process than those affecting the sexual organs and mammary glands.

In the course of her married life a woman ordinarily receives into her vagina a relatively large quantity of semen, which, in accordance with physical laws, enters into endosmotic and exosmotic exchange with the tissue juices of her own body. A portion of the semen is no doubt absorbed, in the course of time a not inconsiderable amount, and in this way the wife's system is impregnated by that of the husband. To this cause Toff attributes the strengthening effect of habitual sexual intercourse upon anæmic and feeble young women, and on the other hand, the debilitating results of malthusian preventive measures.

In regard to the second point also Toff insists on the importance of paternal influence conveyed by the semen, not only upon the child conceived, but also on the maternal organism. He lays stress on two important phenomena: (1) Latent syphilisation, without absolute syphilis, of the mother of a child begotten by a luetic man, and (2) the immunisation of a pregnant rabbit against anthrax by the inoculation of the foetus in her womb. From all this Toff argues that by sexual intercourse, and also by gestation, the female organism becomes actually impreg-

nated with the tissue-juices or chemical combinations of the male body, and that to this may be attributed the manifold changes induced in the female system by cohabitation and pregnancy. It is difficult to assign a limit to the duration of such impregnation; it is, however, a well known fact that children engendered by a second husband often resemble the first. In breeding animals this fact is still more prominent.

Toff considers in principle the deduction logical that impregnation of this kind is desirable for, and is of material advantage to, the female system. On the other hand, if the male is unhealthy, his semen exercises a bad influence, to which Toff suggests that certain symptoms of pregnancy, such as salivation, hyperemesis, cephalalgia, eclampsia, &c., may be attributed. Even hereditary influence may come into play in this way, though the man himself may apparently be quite sound.

ON HÆMATOMOLES.

BAUEREISEN (*Zeitschr. f. Geb. u. Gyn.*, Bd. li., Hft. 2), in endeavouring to trace the etiology, on the basis of exact histological examination of a series of sections of the fruit sac, from a molar pregnancy, in which the premature embryonal structures proved of peculiar interest, concludes that there is a typical form of molar pregnancy to which the term aneurysmal mole applies better than hæmatomole. The original cause of this condition lies in disease of the uterine mucosa, its direct cause is the obstruction of the veins of the intervillous spaces by the deportation of chorionic villi. Secondary causes may be found in the early occurrence of hydramnion, and in the independent growth of the membranes after the death of the embryo.

THE BLOOD IN PREGNANCY.

PAYER, Graz (*Archiv f. Gyn.*, Bd. lxxi., S. 421), supplements a comprehensive review of the literature of this subject with a report of his own researches, which show that the blood of pregnant women is normal as regards the number of red corpuscles, the amount of hæmoglobin, and molecular concentration; but is slightly deficient in alkalinity and exhibits a moderate leucocytosis, cor-

responding to the maximum physiologically normal. He suggests that this leucocytosis may be connected with the deficient alkalescence.

CARSTAIRS, DOUGLAS (*B. M. J.*, 1904, i., p. 709), practically confirms the above. In considering the coagulation time in connection with the alleged tendency of the blood in eclamptics to form thrombi readily, he concludes that there is nothing to support the contention that the thrombi found in certain organs in fatal cases of eclampsia are due to an increased coagulability of the blood in that condition.

THE FREEZING POINT OF THE BLOOD IN PREGNANCY, LABOUR AND CHILDBED.

FUETH, Leipzig (*Zeitschr. f. Geb. u. Gyn.*, Bd. li., Hft. 2), concludes from thirty exact experiments that the freezing point of the blood of women during gestation and labour at term is distinctly (from 0.035° to 0.04° C.) higher than than that of the blood of women who are neither pregnant nor parturient. This fact cannot, as has been supposed, depend upon hydræmia, which recent researches has proved to be absent. Various causes might account for the elevation of the freezing point, difference in the renal activity, or in the nutrition or altered respiration, and consequent difference in the gaseation of the blood: but exact researches prove that none of these can be accepted, so that Fueth has to content himself with publishing the fact of this remarkable condition without being able to offer any explanation of it.

HYPEREMESIS GRAVIDARUM.

JUNG, Greifswald (*Monats. f. Geb. u. Gyn.*, Bd. xviii., S. 570), characterises hyperemesis as the transition of a condition which, during pregnancy, is to some extent physiological into a pathological state, owing to changes regularly occurring in the system of a gravid woman. It is seldom met with, and must in no way be confused with the ordinary vomiting of pregnancy. True hyperemesis gravidarum, with all its consequences, may be simulated by a condition intermediate between autosuggestion and simulation. Therapeutically all so-called specific medi-

cines are to be avoided. If an absolute diagnosis has been made, perfect rest in bed must be prescribed; fluid nourishment (ice milk) may be given by the mouth, but if the vomiting continue, nutrient clysters only for some days, after which oral nourishment may be tried again. Great care must be taken lest the patient should secretly procure and consume other food than that ordered; failures in private practice may often be attributed to this cause. Interruption of the pregnancy for hyperemesis must be avoided if possible, and in most cases may be so, and before such interruption is decided upon, the patient should submit to treatment in a hospital.

OSTEOMALACIA, WITH MULTIPLE PIGMENTED SARCOMATA AND BONE CYSTS.

SCHMORL, Dresden (*Muenchener m. Wchns.*, 1904, No. 12, S. 537), exhibited to the Dresden Medical and Scientific Society the skeleton of a woman who died at the age of 75. She had a very old spontaneous fracture of the left thigh, which had never united. Death was apparently due to purulent bronchitis. At the autopsy a typical osteomalacia was found, curvature of the spine, with the formation of fishy vertebræ, osteomalacic pelvis, deformation of the thorax, a spongy condition of the cortical parts of the long bones, twisted clavicles, &c. All the bones were affected, including even the calvarium, which was converted into finely porous, reddish-white bony tissue, very soft, and cutting like soft wood.

In many of the bones, skull-cap, sternum, ribs, vertebræ, pelvis and long bones, there were brownish-black tumours, in size from that of a pea to a cherry, mostly in the cortical, but here and there in the central parts of the bones, and consisting of spindle and giant cells. The brown pigment contained iron. In the brown tumours in the ribs there were cysts, some as large as peas; at the seat of the fracture in the thigh there was a large brown tumour. The bone marrow was for the most part changed into fibrous tissue; there was marrow fat in the long cylindrical bones.

Schmorl, comparing the case with similar ones reported by v. Recklingshausen, Schoenenberger and Hirschberg, pointed out that it differed from them inasmuch as the

pigmented sarcomata were found not merely in the cortical but also in the marrow cavities, and embedded not merely in fibrous but also in fatty marrow.

In regard to the obscure ætiology and pathogenesis, Schmorl was inclined to agree with v. Recklingshausen in attributing the genesis of the tumours to physical causes.

ECLAMPSIA.

MEYER-WIRZ (*Archiv f. Gyn.*, Bd. lxxi., S. 15) reports upon 117 cases of eclampsia treated in the University Frauenklinik at Zurich during the last eighteen years. Apart from 3 fatal cases of sepsis the mortality was 32, or 27·3 per cent., amongst mothers, and of the mature or viable children 38 per cent. The frequency of the disease was once in 117·3 labours. In 38 instances the fits commenced after admission into the klinik, and in 8 of these cases it had been ascertained before the first convulsion that the urine was free from albumen. On the other hand, in 35 cases submitted to autopsy, there were only 8 in which previous renal affections could be excluded with certainty. Prophylactic treatment is most beneficial. After the onset Prof. Wyder is entirely in favour of active measures, with cautious limitation as regards cervical incisions and vaginal section, more unreservedly as regards metreurysis and dilatation of the cervix by Bossi's method, not omitting the usual drugs, &c.

ECLAMPSIA TREATED BY THYROID EXTRACT.

BALDONSKY, Tomsk (*Wratsch. Gas.*, 1804, No. 1), confirms the favourable effects of the administration of thyroid extract in eclampsia reported by Nicholson of Edinburgh, on the ground of two cases so treated by him in Professor Grammatiki's Klinik. The first was one of rather severe eclampsia in a multipara, the fits ceased after the administration of two 0·3 gramme tablets, and after a third was given the patient completely regained her consciousness. The treatment was continued for the two following days and the woman got well. More than a fortnight later she had a severe recurrence (sixteen fits), which was subdued by 1·8 grammes of the extract. The second case was that of a woman in her first labour; the fits ceased after two tablets, although the waters had not broken, and she had a normal labour and childbed. Narcotics as well as thyroid extract were freely administered in the first case.

DILATATION OF THE CERVIX BY BOSSI'S INSTRUMENT.

HAMMERSCHLAG, Koenigsberg (*Monats. f. Geb. u. Gyn.*, Bd. xvii., Hft. 6), reports upon 17 cases in which Bossi's dilator was employed: In 8 for eclampsia, 5 for infection, once for premature detachment of the normally situated placenta, and 3 times for prolapse of the cord. Dilatation and delivery never took at the most more than forty-five minutes. The danger of laceration of the cervix is constant, and tears of this kind occurred in three cases, in extent varying from incomplete rupture of the uterus down to slight tears in the portio; none of these accidents led to a fatal result. The details of the cases are given, and a *résumé* of the German literature on the method of dilatation. The conclusions Hammerschlag arrives at are as follows: Bossi's method affords the means of delivering a woman considerably more quickly than any other, but is always liable to cause laceration of the cervix. It should only be employed by a skilled obstetrician, and under stringent indications in regard to the mother (eclampsia, severe infection, premature detachment of the placenta from its normal seat, or serious internal indications); under other circumstances metruerysis is a less serious proceeding. Bossi's method is contraindicated by placenta prævia, or intense rigidity of the cervix. It is never indicated in the interest of the child, unless any danger to the mother from its employment can be excluded.

BOSSI'S METHOD IN ABORTION AND AFTER TAKING UP OF THE CERVIX.

SCHUERMAN, Berlin (*Monats. f. Geb. u. Gyn.*, B. xviii., S. 513), on the basis of ten cases of abortion in the fourth to the sixth month and of labour at term, considers that dilatation of the os uteri with Preiss's modification of Bossi's instrument, after the portio vaginalis has been taken up, is a less severe and less dangerous proceeding than making incisions, but that the use of the instrument while the cervix still persists to a greater or less extent should be extremely limited. He prefers Preiss's modification to any other, but thinks it could be improved by increasing the pelvic curve, and by longer slightly curved cervical parts.

HAHL, Helsingfors, also reports favourably on its⁷ use in eleven cases: Eclampsia, ablatio placentæ, abortus four to six months, imminent rupture, fever, asphyxia fœtus, partus præmaturus art.

TWINS BORN AT AN INTERVAL OF SEVENTEEN DAYS FROM
A UTERUS SEPTUS.

PAULIN (*Hospitalstidende*, 1904, No. 6) reports: A secundipara, aged 25, whose catamenia were established regularly at 16, who had never aborted, and whose first child, a boy, had been born at term two and a half years previously, was under treatment in hospital for scarlatina from February 22 to April 15, 1903. She believed herself to have conceived directly after her discharge, as she had no return of menstruation. She had good health during her pregnancy until on December 15, 1903, she was surprised by the waters breaking; no labour pains occurred till the same evening, but at 8 p.m. a living girl was born, head presenting, and shortly afterwards a normal placenta (with polar perforation) and normal membranes. The midwife noticed that there was a second child in the womb, and, as no contractions occurred, Paulin was summoned to the case. He easily made out the fœtal parts, and heard the heart sounds distinctly; on examination he felt in the vagina, and to the left side of some soft tissue, a comparatively hard and rigid cervix, with a partially patent orifice; the finger could not be introduced far enough to feel the child. The woman soon fell asleep, felt well the next day, and there were no uterine contractions. Hæmorrhage soon stopped, and she had no lochia; the breasts were lax and no milk was secreted; no fever. She got up on the ninth day, and looked after her house till December 31, when the waters broke, the pains did not come on till that night; but at 6 a.m. on January 1, 1904, a living female child was born, breech presenting; normal placenta and membranes, again with polar perforation, soon followed. After delivery the contracted womb could be felt in the right side of the hypogastrium. Hæmorrhage and lochia were rather copious, but she had a normal and fever-free childbed. The breasts soon enlarged, and the supply of milk was so plentiful that she was able to suckle both children.

The weight of the first child, born four or five weeks too soon, was 1,900 grammes ; that of the second, fourteen days before term, 2,500 grammes. On January 18, 1904. Professor Kaarsberg examined the woman, and found the uterus as large as if in the second month of pregnancy ; but there was no marked elongation of the anteroposterior diameter. About 1 cm. above the orifice he found a septum dividing the interior of the uterus into two cavities, a left and a right, into each of which the sound passed forwards and outwards. No division of the uterus into two could be detected by external palpation. Paulin, reviewing other cases of the kind already published, does not think that in any of them, or in the present case, there can be any question of superfœtation.

CENTRAL RUPTURE OF THE PERINEUM.

AZWANGER (*Wiener med. Presse*, 1904, No. 3) reports : In a breech presentation one of the elbows of the foetus took the wrong way, and was forced through the perineum. In the extraction of the head the bridge left behind the posterior commissure was torn through.

PUERPERAL SEPSIS AND SEROTHERAPY.

GUIZZETTI (*Rif. med.*, 1903, Nos. 44, 45) reports upon six severe cases of puerperal fever treated with antistreptococcic serum. One case, which before treatment was ascertained to be due to a mixed infection, was fatal, the others were all supposed to be infected by streptococci only. The serum used was obtained from the Institut Pasteur, and was one of the so-called polyvalent serums, that is to say, was obtained by van de Velde's process from a horse which had been immunised against various kinds of streptococci and their toxines. The amount used was from 50 to 100 cm. in divided doses of 10 cm. Guizzetti was most favourably impressed with the action of the serum ; the fever rapidly diminished, and with it all symptoms of infection, especially the confusion of the sensorium. The onset of septicæmia was either warded off, or when it had already appeared ran a milder course. Metastases disappeared, on the whole, with surprising quickness, and complete recovery was much accele-

rated. On the other hand, the effect on the uterine mucosa was on the whole less, and was tardy, so that he does not hesitate to recommend local measures in addition to serotherapy. He offers the explanation that other infectious germs than the streptococcus may be at work in the uterus. The serum treatment, however, prevented the development of purulent lymphangitis and thrombophlebitis in the uterus and adnexa.

CAIE (*Brit. Med. Journ.*, November 7, 1903) reports: A primipara of 25 was attacked by very severe puerperal infection. Local treatment proving of no avail, the injection of 25 cm. antistreptococcic serum caused rapid improvement, and as a precautionary measure the injections were repeated (daily?) for a week. At the seat of the injections on the abdomen, and one week after the last one, two small abscesses appeared, and a third on her elbow, and Caie refers these to the serum and not to any fault in the antiseptis.

JONES (*ibid.*) gives a detailed account of another case which did not improve till 90 cm. of serum (Pasteur) had been injected.

GROCHTMANN (*Deutsche m. Wchns.*, 1904, No. 10) cured a very severe sepsis after abortion with 100 cm. of Aronsohn's serum.

PUERPERAL GANGRENE OF THE EXTREMITIES.

WORMSER, Basle (*Wiener kl. Rundschau*, 1904, Nos. 5 and 6), has collected 80 cases of gangrene in childbed, which he divides into three groups, according as they commenced: (1) During pregnancy, 7 cases; (2) during childbed, 66 cases; (3) 7 were instances of Raynaud's disease. The first and third group, as not being strictly puerperal, fall out of consideration. Of the puerperal cases, in 58 the lower extremities only were affected, in the other 8 various other parts of the body, sometimes—and as a rule in cases of very severe pyæmia—several parts in the same patient. The cause of such gangrene is invariably infection followed by processes obliterating arteries or veins, or vessels of both systems, in which processes endocarditis is an important factor. As the statistical details given by Wormser show, the prognosis is very

unfavourable, from one half to two-thirds of the patients die, including all cases not operated on.

PYELO-NEPHRITIS AND THE PUERPERAL CONDITION.

WALLICH (*C. R. Soc. Obst. Gyn. Pæd.*, February, 1904) endeavours to answer the following question: What is the effect of a pyelo-nephritis upon a woman in the puerperal condition, when the vulva is exposed several times a day to the infective influence of a purulent urine; and whether, in case of an elevation of temperature, it is possible to distinguish between a fever due to pyelo-nephritis and one due to puerperal infection?

From a number of collected observations he formulates the following conclusions: The recovery may be perfectly normal and apyretic, particularly if no fever has been present for some time before labour; but there may be pyrexia if the pyelo-nephritis had provoked any fever shortly before labour. This pyrexia, however, might be distinguished from the fever of puerperal infection by its presenting wider oscillations of daily temperature, sometimes reaching, or even exceeding, 2° , and by a morning remission to 37° C., or lower. Moreover, the pulse would not exhibit an acceleration corresponding to the elevations of temperature; and the general condition of the patient, outside the daily period of fever, would be more satisfactory than in puerperal infection.

P. Z. H.

MORTALITY IN HYSTERECTOMY FOR PUERPERAL INFECTION POST ABORTUM.

MOUCHOTTE (*Ann. Gyn. Obst.*, March, 1904) has collected 30 of these cases, which he classifies as follows: (a) Fifteen hysterectomies for infection limited to the uterus or complicated with utero-ovarian thrombosis; 13 vaginal, with 7 recoveries and 6 deaths; 2 abdominal, with 1 recovery and 1 death; (b) 15 hysterectomies for uterine infection, complicated with peritonitis at the beginning or during the course of the disease, with or without pyosalpinx; 5 vaginal, with 3 recoveries and 2 deaths, and 10 abdominal, with 5 recoveries and 5 deaths. These figures should not be considered as indicating one method of operation in preference to the other, as the details of the various cases show that a greater number of those operated on by the abdo-

minimal method were in a very serious condition, than was the case in those operated on *per vaginam*. Of 3 other cases of total abdominal hysterectomy performed for puerperal infection *post abortum*, complicated with fibromyoma, 1 recovered and 2 died.

P. Z. H.

PUERPERAL METROPHLEBITIS AND TRENDLENBURG'S OPERATION.

GROSSMANN (*Archiv f. Gyn.*, Bd. lxx., S. 538) reports: In a period of four years 105 women were treated for puerperal sepsis in the Friedrichstadt Hospital at Dresden; 54 died and 51 were submitted to *post-mortem* examination. In 14 instances there was only thrombophlebitis, in 24 only lymphangitis, in 13 both forms of lesion were found. In all the cases of thrombophlebitis, with one exception, in addition to the hypogastric or spermatic veins other vessels were affected, in 3 instances the vena cava. In the 1 remaining case, in which Trendelenburg's operation (extraperitoneal ligature and resection of the thrombosed veins) might have come in question, the woman was too far gone for any operative interference.

SUBCHORIONIC CYSTS.

ALBECK, Copenhagen (*Zeitschrift f. Geb. u. Gyn.*, Bd. li., Hft. 1), found in the literature available to him 164 cases among 2,265 in which the placenta contained cysts. This number must be regarded as below the true one, as cysts of the placenta when small are easily overlooked in any examination not directed specially to their detection. Albeck, by systematic research of a series of 266 placentæ, found cysts in 118 instances, or 44.3 per cent., and in 6 cases the cysts were entirely within the placental tissue; one must therefore accept his statement that subchorionic cysts are extremely common, while intraplacental cysts, to say the least, are not rare.

Subchorionic cysts may be classed in two groups: (1) The flat loose cysts formed in the subchorionic decidua, and (2) the small, full, elastic cysts which arise in connection with decidual prominences. The histological structure, the direct, or indirect, connection with the decidua serotina and other evidence, supports the view that the

origin of both forms of placental cyst is from the decidua ; the question whether the villi invariably found in the walls of the cysts are necessary for their formation the author leaves unanswered. The so-called layer of Nitabuch is formed from the reticular connective tissue within the decidua serotina, and therefore must not be accepted as the boundary between maternal and foetal tissue.

THE ÆTIOLOGY OF PLACENTAL POLYPI.

MICHAELIS, Leyden (*Monats. f. Geb. u. Gyn.*, Bd. xvii., E. Hft.), gives the detailed description of the microscopical examination of a placental polypus, and on the ground of his researches concludes that the view, hitherto accepted, that the origin of such growths is to be attributed to the persistence of fragments of the placenta upon the surface of the mucosa, does not hold good in all cases. He considers that the foundation of placental polypi is formed by chorionic villi situated within maternal vessels which have undergone decidual changes. The villi within these vessels exhibit in their epithelium and stroma Kerntheilung's figuren, and are therefore alive and evidently actively growing. The vessels containing the villi originally seated deeply in the mucosa, become extruded out of that membrane. This is one, perhaps the only, cause of the origin of placental polypi. It is, of course, an example of the exportation of chorionic villi.

THE FREQUENCY OF MAMMARY CARCINOMA IN RELATION TO THE SUCKLING OF CHILDREN.

LEHMANN (I. D., Munich, *Zentralb. f. Gyn.*, 1904, No. II), after collecting the statistics and discussing the various conditions and the customs of the women of Bavaria, Germany, and other European and eastern lands as regards lactation, points out that a comparison of the frequency with which mothers suckle their children and that of the occurrence of mammary cancer, shows that in districts and countries in which women carry out their maternal duties, mammary carcinoma is much more uncommon than in those in which women do not suckle their children. It appears, therefore, that the habit of not nursing, persisted in throughout generations, and the consequent hyperplasia of the mammæ, is a definite factor in the occurrence of mammary cancer.

NOTES.

WE have with regret to record the deaths of the following well-known American Obstetricians and Gynæcologists :—

Dr. JOHN M. DUFF, Professor of Obstetrics and Gynæcology in the Western Pennsylvania Medical College at Pittsburg. He presided over the Obstetric and Gynæcological Section when the American Medical Association met in that city.

Dr. HENRY D. INGRAHAM, Gynæcologist to three hospitals in Buffalo, New York, a member of the American Association of Obstetricians and Gynæcologists.

Dr. THOMAS MURRAY DRYSDALE, one of the founders of the American Gynæcological Society, twice President of the Philadelphia Obstetrical Society, and Consulting Gynæcologist to the Medico-Chirurgical Hospital of that city, aged 72.

Sir ARTHUR VERNON MACAN has been appointed Examiner in Midwifery and Obstetrics in the University of Oxford.

Dr. F. W. N. HAULTAIN has been appointed Examiner in Obstetrics and Gynæcology for the Indian Medical Service.

Mr. ALBAN DORAN has been elected an Honorary Fellow of the Obstetrical and Gynæcological Society at Berlin.

The same distinction has been conferred on Dr. LEOPOLD MEYER of Copenhagen.

At the celebration of the Fiftieth Anniversary of the foundation of the Leipzig Obstetrical Society, the Honorary Fellowship of the Society was bestowed upon Professor MANGIAGALLI of Pavia, and Professor PESTALOZZA and

Professor TRUZZI were made corresponding Fellows of the Society.

Dr. C. J. CULLINGWORTH, whose term of office as Obstetric Physician to St. Thomas's Hospital was extended three years ago, has recently, on his retirement from the active staff—after sixteen years' service—been appointed Consulting Obstetrical Physician and a Governor of the hospital.

Dr. H. McM. PAINTER has been appointed Professor of Midwifery at the College of Physicians and Surgeons of New York.

Dr. WM. NIEBERDING, Professor at the School for Midwives, and Privat-dozent of Obstetrics and Gynæcology at the University of Wiezburg, has at his own wish been allowed to retire.

Dr. A. HEGAR, Professor of Obstetrics and Gynæcology and Director of the Frauenklinik at the University of Freiburg i. Br., has at his own wish been allowed to resign his duties (from October 1, 1904), and in recognition of his long and distinguished services has been promoted to the first rank of Privy Councillor, with the title of "Excellency."

Professor PFANNENSTIEL of Giessen, having declined the Chair to be vacated by Professor Hegar at Freiburg, it has been accepted by Professor KROENIG of Jena, who will enter on his duties on October 1, 1904.

We learn that the Chair of Midwifery at Erlangen was declined by Professor Pfannenstiël of Giessen, and by Professor Kroenig of Jena; Dr. Stoeckel was placed temporarily in charge of the Frauenklinik. Extraordinary Professor KARL MENGE of Leipzig has now accepted the appointment.

Professor HOFMEIER having declined to leave Wuerzburg for Halle, the Wuerzburg students honoured him with a torchlight procession.

Professor GUSSEROW of Berlin, who recently retired, has been given the 2nd Class Order of the Red Eagle with Oak leaves.

The title of Geheimer Medizinal Rat has been granted to Professor JOHANNES PFANNENSTIEL of Giessen, and to Dr. von GUÉRARD of Elberfeld.

The title of Professor has been accorded to Privat-dozent Dr. HANS SCHROEDER, Assistant to Professor FRITSCH of the University at Bonn; and also to Privat-dozent Dr. KARL FRANZ, Assistant to Professor BUMM at Berlin.

The following are the names of those recently made Agrégés d'accouchements, of the Faculties of Medicine of Paris, Dr. Brindeau; of Lille, Dr. Bué; of Montpellier, Dr. Ch. Guérin; of Nancy, Dr. Fruhensholz; and of Toulouse, Dr. Thoyer.

PRIVAT-DOZENTEN. The *venia legendi* in Obstetrics and Gynæcology has been given to:—Dr. PAUL MATHES, at the University of Graz; Dr. JULIUS VOIGT, at the University of Goettingen; Dr. KARL FRANZ, at the University of Berlin, on an inaugural lecture on “The Importance of the Ureters to Gynæcologists”; Dr. SIEGFRIED HAMMERSCHLAG, Senior Physician in Professor Winter’s Klinik at the University of Königsberg, on an Inaugural Lecture on “Rupture of the Uterus”; Dr. MAXIMILIAN HENKEL, at the University of Berlin, on an Inaugural Lecture on “The Treatment of Retroflexion”; Dr. BAISCH, Assistant at the University Frauenklinik, at Tuebingen, on an Inaugural Address on “The Infections of the Female Genital Organs”; Dr. FERDINAND SCHENK, at the German University at Prague, and to Dr. EMILIO ALFIERI, of the University at Parma.

Dr. PAUL KROEMER, Professor Pfannenstiel’s Assistant at Giessen, has qualified with an essay on “The Lymphatics of the Female Genitalia, and the changes they undergo in Malignant Disease of the Uterus.”

Dr. WILHELM ZANGEMEISTER has assumed his duties as First Assistant at the University Frauenklinik (Professor Winter), and gave an Inaugural Address “On Determining the General Indications in Obstetrics.”

The Italian Obstetrical and Gynæcological Society will meet at Palermo in October next.

The American Gynæcological Society has amended its Constitution, and declares that its objects shall be “the promotion of knowledge in all that relates to diseases of women, to Obstetrics and to *Abdominal Surgery*.”

The American Association of Obstetricians and Gynæcologists will meet this year in September under the Presidency of Dr. Walker B. Dorset, of that city.

SUMMARY OF GYNÆCOLOGY, INCLUDING OBSTETRICS.
NOVEMBER, 1904.

ANÆSTHESIA SEXUALIS.

NENADOVICS, Franzensbad (*Monats. f. Geb. u. Gyn.*, Bd. xix., S. 823), after reviewing the fundamental anatomy and psycho-physiology of sexual life, discusses the question of sexual insensibility in women, the different varieties and numerous etiological factors of which demand both causal and symptomatic treatment. In this general fortification of the organism and nervous system, sexual hygiene, instruction and mental influence play an important part. For such treatment he suggests that Franzensbad is a favourable spot.

SPINAL ANALGESIA, ESPECIALLY IN REGARD TO ITS EMPLOYMENT IN GYNÆCOLOGY AND OBSTETRICS.

STOLZ, Graz (*Archiv. f. Gyn.*, Bd. lxxiii., S. 558-652), traces the development of spinal analgesia from its first suggestion by Corning in 1885, and Bier's practical experiments thirteen years later, to the present day. He has himself employed it in 155 gynæcological and 25 obstetric operations, using from 0.04 to 0.08 grainmes of tropacocaine dissolved in cerebro-spinal fluid obtained by the puncture, as many cubic cm. of the fluid being used as centigrammes of tropacocaine are to be injected. The puncture was generally made between the fourth and fifth lumbar vertebræ. The method proved quite successful for plastic operations in the perineum and the rectum for fistula and the paravaginal incision. Moreover, vaginal extirpation of the cancerous tissues in Schuchardt's way, and abdominal extirpation with exeresis of the pelvic glands and connective tissue, was also undertaken under spinal anæsthesia, but in the laparotomies the result was always uncertain, and narcosis by inhalation had to be induced to prolong the analgesia in many cases. The troublesome complications and the sequelæ commonly reported Stolz met with but seldom,

and only to a slight degree. In the 25 obstetric operations (forceps, version, manual detachment of the placenta, &c.), the dose injected was 0.05 gm. In 21 instances the analgesia was complete, and it was always sufficient.

MARTIN, Greifswald (*Muenchener m. Wchns.*, 1904, No. 41), reported to the meeting of German Naturalists and Physicians at Breslau that he had used Bier's method of lumbar anæsthesia in 30 cases of labour, in primiparæ and multiparæ. In 25 instances the course of labour, including the third stage, and that of the puerperium also, was quite normal. The injections, which were not always easy to administer, were made under Schleich's local anæsthesia. One cubic centimetre of a solution of adrenalin (1 : 2,000) was first injected, and the solution of cocaine five minutes afterwards. The anæsthesia was immediate and lasted a long time, the analgesia not so long. There were no complications such as collapse or paræsthesia. As the labour pains were not felt, the action of abdominal pressure was deficient—indeed, entirely absent except where demanded from the patient by the observer. Martin thinks for the present this method should not displace the use of chloroform in private practice, where not contra-indicated, but that it is worthy of further experimental trial.

LEUCOCYTOSIS IN GYNÆCOLOGICAL DISEASE.

PANKOW, Jena (*Archiv f. Gyn.*, Bd. lxxiii., S. 227), discusses the sources of error which affect the question of counting leucocytes. The cases he reports concern the behaviour of the leucocytes in purulent and non-purulent affections of the generative organs and peritoneum, in carcinoma, myoma, after operation, and during pregnancy, labour and childbed. In gynæcological affections the enumeration of the leucocytes does appear to be of practical importance in deciding whether pus is present or not. On this point the behaviour of the leucocytes is a surer guide than the temperature curve, and repeated counts above 10,000, when other causes can be excluded, are always suggestive of suppurating adnexal disease. [*Cf. Dützmänn, ante p. 4.*]

KRAUROSIS VULVÆ.

JUNG, Greifswald (*Zeits. f. Geb. u. Gyn.*, Bd. lii., Hft. 1), characterises kraurosis vulvæ as a chronic inflammation with

a tendency to shrinking of the corium, and with the disappearance of the elastic fibres of the affected tissue. This chronic atrophic vulvitis with loss of the elastic elements he has demonstrated in four cases here described in detail and most artistically illustrated; yet clinically or macroscopically there was no suggestion of kraurosis about them. The changes in the skin consisted in thickening and pigmentation, or in another case in extreme thinning, a white and tendinous appearance, or, again, in hardly any macroscopic change. Signs of chronic inflammation: small-celled infiltration, hyperæmia, œdema, loss of elastic elements, and sclerosis of the connective tissue of the corium, were present in each case. Histologically, therefore, he finds that there is no qualitative, but merely a quantitative, difference between pronounced kraurosis and chronic vulvitis, and, for the future, that no distinction should be drawn between these affections in principle, but merely in degree. Kraurosis is to be looked upon as a final stage of chronic vulvitis, and can be no longer considered an independent and peculiar form of disease. Its etiology is identical with that of vulvitis, which in each case is the fundamental process in which it originates.

ON CAULIFLOWER GROWTHS OF THE VULVA.

HELLENDAL, Tuebingen (*Hegar's Beitræge*, Bd. viii., Hft. 2), on the basis of a case of elephantiasis tuberosa, one of elephantiasis condylomatosa, one of papilloma carcinomatosum, and ten of carcinoma vulvæ, operated upon in the Tuebingen Klinik, discusses the clinical and anatomical peculiarities of cauliflower growths of the vulva. He holds that considering their rarity the records of these tumours should be supplemented by drawings. Elephantiasis is, of course, recognisable by the great hypertrophy of the cutaneous and subcutaneous connective tissue. In conglomerate growths of condylomata acuminata, the scantiness of such connective tissue, together with the hypertrophy of the papillary bodies, is striking. In papillary carcinoma evidence may be found in the atypical proliferation in the growths in the deeper tissue supported by the presence of cancrioid cells. Every case must be submitted to microscopical examination, without which the diagnosis of these tumours is hardly possible.

THE RELATION BETWEEN THE CERVIX AND THE BLADDER
AND ITS SIGNIFICANCE IN RADICAL OPERATIONS FOR
CANCER.

SAMPSON (*Johus Hopkius Hosp. Bull.*, 1904, May) points out that the area to which the cervix of the uterus is in contact with the bladder behind the trigone varies in different individuals, and also according to the position of the uterus in the pelvis and the degree of distension of the bladder. Under normal circumstances the two organs are but loosely attached to one another and their separation is easily accomplished. In carcinoma of the cervix the vesico-vaginal fistulæ resulting from necrosis of the growth, and the accidental injury of the bladder in hysterectomy for that disease, bear witness to the rapidity with which the cancer, when extending forwards, involves the bladder wall. When the uterus, parametrium and upper portion of the vagina are detached from the bladder a large area of the vesical wall is exposed, extending from the utero-vesical peritoneal fold above, to a point below varying with the detachment of the vagina, but generally involving part, or the whole, of the trigone; laterally this area, if the ureters are dissected out, may extend outside the openings of these canals into the bladder. There is no advantage in removing much of the lower portion of the vagina; if it is not involved in the disease, the more removed the greater the injury to the bladder, but the wide excision of the tissue is most important. The amount of injury to the bladder varies with the difficulty in freeing it, which in turn depends on the degree to which it is adherent. The blood supply of the bladder may be impaired by the ligation of the large vessels from which the vesical arteries arise; moreover, all vessels passing to the area of the bladder wall detached are destroyed, and possibly some in the wall itself injured. Nerves and ganglia, perhaps important in maintaining the physiological activity of the bladder, may also be destroyed in operations for cervical carcinoma. Retention of urine, or inability to empty the bladder, completely bear witness to the injury to the function of the organ apt to follow these operations. In consequence of this injury the bladder is less capable of resisting infectious organisms which may gain access to it; an additional avenue for such is afforded by the injured area of the bladder wall. Cystitis is very apt to result, and occurred in 12 out of 16 cases, in which Sampson traced the effects of the operation upon the

bladder, and in 2 of the 12 cases resulted in renal infection and death. In 3 of the other 4 cases an accidental vesico-vaginal fistula was present and, as in 2 of these cases large numbers of *B. coli* were present, by allowing full drainage, apparently prevented cystitis.

It seems best after these operations that every three or four hours the bladder should be emptied by a catheter, and afterwards irrigated, as a prophylactic means of preventing retention of urine and avoiding or mitigating cystitis, and that if severe cystitis occurs, a vesico-vaginal fistula should be made, which may be done without even a local anæsthetic. The excision of such portions of the bladder wall as may be adherent to the cancerous growth improves the chance of cure, and a vesico-vaginal fistula diminishes the danger of post-operative cystitis and of possibly fatal ascending infection of the urinary tract.

CYSTITIS AFTER GYNÆCOLOGICAL OPERATIONS.

BAISCH, Tuebingen (*Hegar's Beiträge*, Bd. viii., Heft 2), has made bacteriological examination of the urine in 40 cases in which cystitis was detected on the very first day of its appearance. Streptococci were present in 6, staphylococci in 34, and in 10 instances the *B. coli* was associated with streptococci or staphylococci. The *B. coli* was never found alone if there had been no cystitis existing before the operation, and many leucocytes were present in the sediment; but when the urine was examined from day to day this was changed, and about the second week counted from the beginning of the cystitis, the *B. coli* appeared in association with the staphylococci and streptococci, and, on the average, from the third or fourth week the still thick and mucopurulent urine almost always afforded a pure culture of the *B. coli*. Post-operative cystitis is, in fact, a staphylococcic or streptococcic infection, in which the *B. coli* takes a secondary part. As regards the source whence these infective germs come and how they reach the bladder, the idea of direct infection from the bowel is unsupported by any evidence whatever. To determine whether the germs came from the urethra, Baisch and Piltz investigated the bacteriology of the urethra and ascertained that that canal had no flora of its own, that such germs as it contained were derived from the vulva, vestibulum, or vagina, and varied according to their origin. The germs, moreover, are not the same during pregnancy

as during childbed, nor in the healthy as in the bedridden, nor in patients operated on as in those not yet so. Staphylococci are constantly present in the secretions of the vulva and urethra in patients who have not undergone operation, but the *B. coli* only in two-thirds of the cases; in all women confined to bed after operation, both staphylococci and *B. coli* are present in the urethral secretions. The immigration of the *B. coli* is due to the lying in bed; infrequent micturition, however, undoubtedly helps. The omission of such mechanical cleansing no doubt favours the upward course of the germs.

Post-operative cystitis is, as a rule, due to catheter infection, though it is true that cystitis occurs in from 2 to 3 per cent. of the cases in which no catheter is used. Post-operative retention of urine (ischuria) and the lesions the bladder is exposed to in many gynæcological operations, favour its occurrence. Experiments upon animals proved that the introduction of infective germs into the bladder, with or without the assistance of retention of urine, was not itself enough to cause cystitis, but that such inflammation did occur after an injury sustained by the external surface of the organ.

It is of great importance for the prevention of post-operative cystitis to induce the patient to make water of her own accord. To this end, when there is ischuria in the evening after the operation, Baisch advises the injection of 20 cm. of 2 per cent. sterilised glycerine of borax into the gall bladder by means of a Nelaton catheter and a piston syringe. Spontaneous micturition generally occurs within five minutes, but should the injection not have this result the bladder should be washed out with 500 ccm. of a 3 per cent. solution of boric acid each time the catheter has been used. If this be done post-operative cystitis will hardly ever occur.

ROSENSTEIN, Berlin (*Zentralb. f. Gyn.*, 1904, No. 28), says that even after slight operations he has not found the retention of urine prevented by the injection of glycerine of borax. The method of irrigation recommended by Baisch demands much time and patience, and even then is not uniformly successful; in the 25 cases of Wertheim's total extirpation, there were 3 instances of cystitis in spite of preventive irrigation. He draws attention to the double catheter he described in 1902, consisting of an outer safety tube which is introduced into the urethra only as far as the

sphincter, and an inner tube, which without coming into contact with the external genitalia is passed directly into the bladder through the safety tube ; moreover, in order that the inner tube should not carry on into the bladder any infective germs which the outer one may have taken as far as the sphincter, the two tubes are made of different diameters ; the inner tube is provided with a rigid guide, and nowhere touches the safety tube, and so avoids any infective germs collected upon it. The new model of the instrument made by Loewenstein is hardly thicker than an ordinary glass catheter and may be used without causing any injury, even when the urethra is a narrow one. Rosenstein gives statistics from Professor Israel's Klinik. In 34 operative cases during the last year and a half the catheter was employed repeatedly, sometimes as often as twenty times, but there was only one case of cystitis among them.

CONGENITAL AND ACQUIRED ATRESIA OF THE FEMALE GENITALS AND ITS TREATMENT.

HOFMEIER, Wuerzburg (*Zeits. f. Geb. u. Gyn.*, Bd. lii., Hft. 2), publishes a number of cases of the above category and describes the various treatments he has adopted. The first case shows that even in apparently congenital atresia with partial duplication of the genitalia, intense inflammatory processes in the adnexa of the affected side must have taken place, and in this instance before the formation of a true hæmatometra. The second, an acquired and extensive atresia of the upper part of the cervix, was treated by an artificial fistula between the cavum uteri and the vagina. The next, a uterus bilocularis with hæmatometra of the occluded side, was operated on in the same way. Hofmeier also describes an operation, by Pfannenstiel's plan, on a complete atresia of the vagina with hæmatometra in a fully-developed uterus, and cases of true congenital atresia, some with considerable collections of blood, but without the formation of hæmatosalpinx.

BATHING DURING THE MENSTRUAL PERIOD.

EDGAR (*Amer. Jour. Obst.*, September, 1904), says that all forms of bathing during the menstrual period are largely a matter of habit, and can usually be acquired by careful and general precaution. But this does not hold good for every woman, and surf bathing, in which the skin remains chilled for some time, should always be excepted. The

daily tepid sponge bath (85° to 92° F.) during the menstrual period is not only harmless but is demanded by the rules of hygiene. In most women, if not in all, tepid sponge bathing on the second or third day after the establishment of the flow, is a perfectly safe practice, and in most women the habit of using a tepid shower or tub bath after the first day or two of the flow can be acquired with safety.

J. F. J.

PRECOCIOUS MENSTRUATION.

STEIN, Heubende (*Deutsche m. Wchns.*, 1904, No. 35), reports a case in which a girl of 6 months had catamenia coincident with her mother, and in which the secondary characteristics of sex were also developed.

WISCHMANN (*Zentralb.*, 1904, No. 30), discussing the cases quoted by Veit and Prochownic, in connection with one in which the catamenia were established at 10 years of age (twelve periods in sixteen months), speaks of the prognosis as dubious, and insists on the importance of informing the parents that sexual feeling may be developed very early. Pregnancy has occurred at the age of 9 years.

PRECOCIOUS MENSTRUATION AND SARCOMA OF THE OVARY.

RIEDL, Linz (*Wiener kl. Wchns.*, 1904, No. 35), reports a case of a child of 6 years old in whom, from the beginning of her fourth year, bleeding from the genitals occurred regularly. A tumour, which was as large as a man's head, and proved to be a round-celled sarcoma with numerous softened cysts, was extirpated from the left ovary. The hæmorrhage ceased after the operation, but the tumour soon recurred.

TUBAL MENSTRUATION.

THORN, Magdeburg (*Zentralb. f. Gyn.*, 1904, No. 32), denies that there is any menstruation in the healthy tube on the evidence of laparotomies purposely performed on menstruating women, and of specimens removed by vaginal hysterectomy on account of carcinoma, myoma, or endometritis. On the other hand, the process undoubtedly affects tubes which have undergone morbid changes, as has been proved by observations of genital atresia and tubo-abdominal or tubo-vaginal fistula. He reports two such cases, in one the hæmorrhage accompanied normal menstruation, in the other was substituted for it.

EARLY MENOPAUSE.

SCHALIT (*Austral. Med. Jour.*, 1904, Aug.), reports the case of a woman of 33 years of age, who menstruated irregularly from 14 years of age, was married at 17, and conceived five months later; she had two days' hæmorrhage at first, second and third months, and an occasional show up to term. A healthy female child was born after a difficult labour followed by hæmorrhage. After six months' nursing her milk failed, and she had several severe hæmorrhages at irregular intervals. She conceived again one year after her first labour, but aborted at two months with severe floodings, and afterwards irregular hæmorrhages. She had no regular menstruation for twelve months, but then again conceived, and after the birth of a weakly male child by a difficult labour with great hæmorrhage, she was ill for a long time, had no milk, and menstruation never reappeared. That is to say, the menopause was established at the age of 21. Her grandmother, who enjoyed good health till the age of 74, menstruated at 13, married at 17, and had three healthy children, but her menses finally ceased at 35. Her mother, a healthy pluripara, did not reach her climacteric till the age of 48.

LEUCORRHEA AND YEAST TREATMENT.

GOENNER, Basle (*Korrbl. f. Sch. Aerzte*, 1904, p. 181), has found that fluor, whether gonorrhœal or not, is best treated with fresh yeast, which, rubbed up with sugar to form a thickish fluid, he smears with a proper spoon on the walls of the vagina, and also upon the vulva when that is inflamed. The yeast is kept in the vagina by a plug of wadding.

HÆMORRHAGIC GLANDULAR ENDOMETRITIS.

PFORTE (I. D. Berlin, 1903; *Zentralb. f. Gyn.*, 1904, No. 42), relates: An intellectually deficient woman, 44 years of age, who had had five children, complained of profuse bleeding. Save an enlarged uterus, nothing pathological was found in her genitals. As she did not get better as an out-patient, her uterus was curetted, and the *débris* showed a glandular endometritis. Her condition did not improve; she admitted onanism and coitus interruptus, and under treatment and advice improved, but soon relapsed, and the hæmorrhage became so profuse as to threaten a fatal anæmia. Panhysterectomy was therefore performed. The

uterus was the size of one four months' pregnant. The musculosa was much thickened, even to 6 cm. The mucosa was swollen and thrown up into ridges; the musculosa consisted of two independent layers, an outer thinner and an inner thicker layer, the latter distinguished by being beset with cavities, some larger, some smaller. The microscopical examination, which was carried out with the greatest possible care, proved that these cavities were formed by prolongation of the glands into the musculosa and ectasis therein. Two forms could be recognised; in the one, the glandular prolongations joined together to make large fissures; in the other, they passed parallel into the deep tissue and slung round to form tight balls, as if they had come to harder tissue. The cellular coat was single-layered, and showed no malignant change. The stroma was plentiful and stained very deeply.

FAILURE OF THE PESSARY TREATMENT OF MOBILE RETROFLEXION.

KLEIN (*Muencheuer m. Wchs.*, 1904, S. 1412) reported to the Munich Gynecological Society on July 13, 1904, that to gain a clear idea of the advantages of pessary treatment he had analysed the results obtained in his private practice during the last ten years. Among 4,750 patients, 526 had backward displacement of the uterus, mobile in 362 cases, fixed in 164; but to be of any value at all in the estimate, the patients must have been at least a fortnight under observation. Of the mobile retroflexions, 112 (31 per cent.) were so. The others probably found the treatment in no way beneficial, and therefore may be omitted. Of the 112 the uterus kept its forward position in 17 cases (15 per cent.) A doubtful result, replacement as long as the pessary was left, and falling backwards when it was removed, was obtained in 37 (33 per cent.) Failure, the uterus falling back in spite of the pessary, in 58 cases (52 per cent.) Fixation of the uterus on account of retroflexion was done in only 20 cases, four times unsuccessfully. Very often, in spite of the fixation, the displacement recurs later on. He had at the Poliklinik seen dozens of women with retroflexion after being operated upon elsewhere. One cannot estimate the result of the operation for at least five years. Moreover, antefixation often gives rise to pain. The treatment of retroflexion, in his opinion, has completely failed, and the standpoint he has now adopted on the

ground of his own accurately tested material is almost that of Theilhaber. He replaces the uterus in retroflexions of the third degree in which the organ is incapable of helping itself; in retroflexions of the first and second degrees that is by no means the case. He replaces the uterus also, even when the displacement is not of the third degree, in sterile women in whom no other cause for the sterility can be detected, and, of course, also every incarcerated retroflexion of the gravid womb.

CROQUET BALL THIRTY YEARS IN THE VAGINA.

ORLOFF (*Roussky Wratsch*, 1904, No. 11), reports: A woman of 66 was admitted into hospital suffering from pains in the hypogastrium and vagina, and a fetid discharge. Married at 26, she had her first child at 34, and afterwards suffered from severe pains in her lower abdomen, due to prolapse of the womb. These pains became much worse after her second confinement, and the patient then herself introduced a croquet ball into her vagina. From that time the weight and pains ceased; the functions of the bladder and rectum were not disturbed. On examination the vagina was found in a condition of senile atrophy, the finger impinged upon a round and hard body. The urethra admitted an ordinary sound, the urine was clear, and there was nothing abnormal about the rectum. On account of the senile atresia of the lower part of the vagina, it was necessary to remove the round ball piecemeal, though it was quite movable in its place. A pronounced colpitis with some superficial ulceration was cured in five days. The ball had been more than thirty years in the vagina without causing any serious lesion. The wood of which it was made seemed in no way changed.

THE ALEXANDER-ADAMS OPERATION AND ITS PERMANENT RESULTS.

REIFFERSCHIED, Bonn (*Archiv. f. Gyn.*, Bd. lxxiii., S. 159), says that in six and a half years this operation has been performed at the Bonn Frauenklinik in 241 cases, of which 102 were followed up. In this reduced number the percentage of recurrence was only 4; 39 women conceived, and in no instance was there any serious trouble owing to the operation. Reifferscheid holds that the Alexander-Adams operation is less dangerous than any of the other

surgical methods of dealing with retroflexion, and that when the uterus is mobile it is almost as efficacious as ventrofixation.

MCKAY, Sydney (*Austral. Med. Gaz.*, July, 1904), has performed Alexander's operation in more than 150 cases, and considers it one of the best operations a gynæcologist can perform. It is most suitable for retroflexion without prolapse in virgins and married women. Moreover, if after performing a curettage he finds the uterus is retroverted, he always shortens the round ligaments, for, if the position of the uterus be not corrected, abdominal pressure may in time cause retroflexion or prolapse. Shortening the round ligaments, combined with amputation of the cervix and colporrhaphy acts well, even if there is slight prolapse as well as backward displacement, as it allows the utero-sacral ligaments (the chief support of the uterus) to regain their tone. And even for severe prolapse, if the woman is in the child-bearing period the operation may be done, but if the menopause is near, or already past, ventrofixation or vaginal hysterectomy is the proper operation. In one of his operations, finding that there was a small hernial sac, and that through it he could easily explore the uterus and ovaries, he extended the plan of his operation. He found out later that Goldspohn had anticipated him. It is so easy to explore the ovaries and tubes through the internal ring that he now adopts this method instead of the median incision when he has to remove a small ovarian cyst or a hydrosalpinx. It is often possible to break down adhesions on both sides of the uterus by one insertion of the finger, but sometimes it has been necessary to open the internal ring on both sides.

GOLDSPOHN'S OPERATION.

KOSSMANN (*Muenchener Med. Wchns.*, 1904, S. 1033), in a communication to the Berlin Medical Society, June 1, 1904, expressed the opinion that women suffering from retroflexion, even when the uterus is mobile, are subject to many pathological symptoms not due to the malposition of the uterus, but to the adhesions this organ has contracted with the surrounding viscera, especially with the great omentum. To this fact he attributed the partial success attending the methods of fixation generally employed, and the Alexander-Adams operation, for even when the uterus is restored to a good position these methods do not affect

the adhesions. In this respect he held that the operation described by Goldspohn some four years ago had indubitable advantages. In it, after the round ligament has been drawn outwards in the usual way, the operator passes his index finger into the abdominal cavity through the inguinal canal, and in this way is able to expose the whole surface of the uterus, to break down adhesions, and to ascertain the condition of the adnexa, and, if need be, draw them outwards for cauterisation, or even for removal. The only disadvantage attending this proceeding is that if the inguinal wound should become infected, the cicatrix may lack resisting power and hernia may supervene. On the other hand, in women who already have hernia as well as retroflexion, the radical cure may be undertaken at the same time as the correction of the displacement.

CORRECTION.

THE BLUNT HOOK OPERATION FOR SHORTENING THE ROUND LIGAMENTS.

Dr. H. W. LONGYEAR has written in reference to our abstract from the *Amer. Jour. Obst.*, November, 1903 (*ante* vol. xix., p. 165), that he in no way claims to be the author of the blunt hook operation for shortening the round ligaments, which was originated by Dr. J. H. Kellogg, of Battle Creek, Michigan.

THE CORRECTION OF UTERINE DEVIATIONS BY PLASTIC SHORTENING OF THE ROUND AND SACRO-UTERINE LIGAMENTS AFTER LAPAROTOMY (FIBRO - FIBROUS, INDIRECT FIXATION).

SPERLING, Koenigsberg (*Zentralb. f. Gyn.*, 1904, No. 35), is against all vaginal and inguinal methods of fixation, and ventrofixation also. His method, which as yet he has only tried in a few cases, consists in opening the abdomen in the middle line, dividing the peritoneal investment of the sacro-uterine ligaments in the direction of their length, and, on the usual principle of plastic operations, uniting the slit transversely. The free ends of the folded and so shortened ligaments are united, and the transverse ligament so formed is stitched to the cervical wall. In pathological antelexion he operates on similar principles.

THE RESULTS OF SUSPENSIO UTERI.

STONE (*Amer. Jour. Obst.*, August, 1904) has investigated the results in 767 operations. The advantage of Kelly's operation is due to the frequent necessity for opening the abdomen in order to treat some condition associated with displacements. The abdomen once opened in the middle line, suspension is preferred to making additional incisions for the Alexander-Adams operation. Suspension, too, succeeds in holding the uterus in a position which does not interfere with the progress of labour. Amongst the cases investigated, there have been 49 full term deliveries with uniformly successful results. When retroversion is associated with downward displacement, fixation rather than suspension should be done, in addition to plastic operations. Fixation should, however, never be done in a patient who is not past the child-bearing age.

J. F. J.

STITCH ABSCESSSES AFTER UTERINE FIXATION.

MACKENRODT (*Zentralb. f. Gyn.*, 1904, No. 33, S. 1002) recently exhibited at the Berlin Obstetric and Gynæcological Society a uterus in the walls of which were many abscesses. One communicating with the cavum had for a long time caused a hæmato-purulent discharge. The uterine tissue felt nodular, as if from myomata. The phlegmonous inflammation and abscesses had their origin in the stitches of an antefixation performed by another surgeon for retroflexion. The kind of suture used could not be ascertained. The condition could not have been due to a perforation during curettage preliminary to the antefixation, the rupture of the large abscess with the cavum uteri had occurred at a later period. Mackenrodt had met with such stitch abscesses causing most serious trouble in many cases, after various methods of antefixation and ventrofixation, and after the enucleation of myomata.

SPONTANEOUS VENTROFIXATION LEADING TO RETENTION OF THE PLACENTA.

FUCHS, Breslau (*Zentralb. f. Gyn.*, 1904, No. 29), reports a case of a secundipara on whom, owing to a mistaken diagnosis, laparotomy had been performed a year previously; instead of the suspected ovarian tumour there was pregnancy, which terminated prematurely two months later.

Labour was easy, except that the placenta had to be detached manually, owing to the absence of contraction of the anterior wall of the uterus on which it was situated. This complication is attributed by Fuchs to adhesions between the uterine and abdominal walls consequent on the untimely laparotomy.

COATING THE HANDS WITH A SOLUTION OF RUBBER IN BENZINE, A SUBSTITUTE FOR INDIARUBBER GLOVES.

MURPHY (*Four. Amer. Med. Ass.*, 1904, Sept. 17), has found by experiment that a coating of a 4 per cent. solution of rubber in benzine, poured on the hands and allowed to dry without friction, while it does not afford so perfect a protection as intact gloves, is, considering the chances of puncture, equal or even superior to wearing gloves, and infinitely safer than operating with the bare hand. The coating is slightly permeable by perspiration, but this, he asserts, is not septic, while epithelium and the secretion of the hair follicles are so. One application on the hands and forearms is sufficient for the whole day, but the fingers must be cleansed and redipped after each operation. The skin suffers less than from wearing gloves.

A SELF-RETAINING RETRACTOR.

REIFFERSCHIED, Bonn (*Zentralb. f. Gyn.*, 1904, No. 35), describes an instrument consisting of two retractors opening like a pair of scissors, the blades to be fixed at any desired angle by a rack. It enables one to dispense with an assistant to hold the edges of the wound apart, and has proved especially useful in the Alexander-Adams operation. It is made by Eschbaum in Bonn.

THE CONTROL OF THE GAUZE PADS IN LAPAROTOMY.

ROSSEL (*Zentralb. f. Gyn.*, 1904, No. 25), describes a method employed for the last ten years by his chief, Dr. Bircher, Director of the Cantonal Hospital, Aaran. Every compress introduced into the abdomen is weighted; a weight of about two scruples is fastened to the corner of each pad by a linen cord some seven inches long, and when the pads are introduced the weights hang down on either side of the abdomen.

TRANSVERSE SUPRA-PUBIC DIVISION OF THE SKIN.

KREUTZMANN (*Amer. Four. Obst.*, July, 1904) points out the advantages of this method of making the incision; since

the abdomen can be opened in the middle line, intra-abdominal or pelvic work can be done, and then at each outer end of the same incision the round ligaments on the outside of the inguinal canal can be found and the Alexander operation performed. He reports three cases treated by this method. The cases must be carefully selected so that the pelvic work may be carried out through a small vertical incision in the linea alba. The Alexander operation he considers is the best surgical method of treating displacement of the uterus. Fixation of the uterus he condemns entirely. Shortening of the round ligaments inside the abdomen he disapproves of because the weakest part of the ligament in the inguinal canal is not strengthened. It is this weak part of the ligament which is done away with in the Alexander operation.

J. F. J.

THE TREATMENT OF PUS IN THE PELVIS.

STONER (*Amer. Jour. Obst.*, September, 1904) says where pus exists outside the peritoneal cavity it should be attacked when possible through an extra-peritoneal incision, and such abscesses readily heal after incision and drainage. Abscesses of the tube, or tube and ovary combined, are intractable in healing after simple incision and drainage. The immediate mortality may be lessened, but the morbidity is certainly increased. Total removal is therefore the better surgery. Whether the pus is sterile or not, drainage should follow operations in which the peritoneum has been soiled with pus. When vaginal incision is practised, it must be thorough. Mere puncturing or aspirating the abscess is the historic relic of surgical impropriety.

J. F. J.

THE TREATMENT OF POST-OPERATIVE PERITONITIS.

GRANDIN (*Amer. Jour. Obst.*, July, 1904) divides post-operative peritonitis into three types: the paretic, the inflammatory, and septic. If in any case he has reason to think that the operation will be performed in the presence of pus, or that, from the nature of the case, pus will form, he administers three hours before the operation 10 grains of calomel with 20 grains of bicarbonate of soda. In the paretic type, in which the abdomen becomes gradually tympanitic, the stomach rejects both food and drugs, and the temperature is but slightly elevated, the chief thing to

do is to relax the spasm of the bowel. There should be no administration of calomel and salts and other drugs. If calomel has been given already, he now gives either atropin or hydrobromate of hyoscin in full dose by hypodermic injection. The spasm relaxes and the patient is relieved. In the inflammatory type, when three or four days after the operation the temperature, the pulse, and the respiration rise concomitantly and the stomach is hostile to food and medicine, the bowels may or may not respond, but the peritoneum is inflamed and wants rest. Calomel for the bowels is already there, he therefore puts an ice bag on the abdomen, washes out the stomach, feeds by the rectum, and gives free doses of codein, which neither paralyses the bowel nor upsets the stomach. In the septic type the toxæmia is not local but general, and the treatment must be to maintain the action of the heart by alcohol and strychnine, and if the kidneys are inefficient to use digitalis and to inject saline solution into the veins, rectum or subcutaneous tissue. Any foci of pus must be opened according to surgical rule.

J. F. J.

THE RELATION OF THE APPENDIX TO PELVIC DISEASE.

PETERSON (*Amer. Jour. Obst.*, July, 1904), from careful clinical and microscopic examination of 200 cases of pelvic disease with a view to ascertaining the prevalence of appendicular disease, concludes: Only a little over 50 per cent. of appendices removed during the course of operations for pelvic lesions will be found microscopically normal. The remainder show forms of acute and chronic inflammation, or the result of former inflammation. The average length of the appendix is between 8 and 9 cm. The maximum length of the appendix is found between the ages of 20 and 30 years. After this period the average length of the appendix is less; the diminution is probably due in many cases to inflammatory changes. Menstrual pain may be due to, or be increased by, the presence of an inflamed appendix. The congestion accompanying menstruation increases the inflammation and gives rise to attacks of appendicular colic. The differentiation between pain due to pelvic lesions and pain due to chronic appendicitis is not easy. The appendix is adherent twice as frequently in those cases where microscopic examination shows past or present disease. A certain proportion of adherent appendices are,

however, perfectly normal microscopically. The shape of the appendix does not serve as an index of its normality or disease. Appendices may be club-shaped, constricted, or bent upon themselves, and yet perfectly normal microscopically. The appendix is the seat of faecal concretions in at least 8 per cent. of all cases. Their presence does not denote that the appendix is diseased. Nearly 50 per cent. of patients with chronic adnexal disease show accompanying disease of the appendix. This may be the result of the direct contact of the appendix with diseased appendages, or infection may travel from the latter to the appendix through the lymphatics connecting the two. In chronic disease of the appendix, adnexal adhesions are present in nearly 50 per cent. of the cases. In some of these, however, microscopic examination shows the appendix to be normal. In 50 per cent. of patients with myomata of the uterus there is disease of the appendix. In 70 per cent. of patients with cystoma of the ovary there is disease of the appendix. The ordinary median abdominal incision amply suffices for the removal of the appendix. Such a removal should neither increase the mortality nor prolong the convalescence. Since it is impossible for the surgeon to determine by the gross appearance alone whether an appendix is diseased, and since when the abdomen is opened for other purposes nearly 50 per cent. of appendices are found diseased, it is the duty of the surgeon, in the absence of contraindications, to remove the appendix in every such case. This is especially so since primary carcinoma has occasionally been found in such an early stage that it could not have been detected by inspection at the time of the operation.

J. F. J.

PRESENT INDICATIONS FOR VAGINAL HYSTERECTOMY.

FAURE (*C. R. Soc. Obst. Gyn. Pæd.*, July 1904) resumes these indications as follows: Vaginal hysterectomy *may* be resorted to in cases of small fibroma, of painful or incurable metritis, and, exceptionally, in inceptive epithelioma of the cervix in corpulent and aged women. On the other hand, it *should* be resorted to in cases of inversion and of prolapse, when it is found desirable to remove the uterus, and it is absolutely indicated in cases of extensive, virulently septic, peri-uterine lesions which persistently get worse and which colpotomy appears insufficient to cure, in cases of puerperal

infection which do not improve under ordinary means of treatment, and in subacute pelvic peritonitis propagating itself towards the abdominal cavity.

P. Z. H.

INTRACTABLE VOMITING ASSOCIATED WITH A UTERINE FIBROSIS AND CHRONIC ADNEXAL DISEASE.

GAILLARD (*Soc. Med. des Hop.*, 1904, May 13) reported a case of intractable vomiting in a nervous woman, aged 42, the subject of numerous small uterine fibromata, one with a pedicle projecting like a polypus into the vagina, and also suffering from chronic adnexal inflammation. When panhysterectomy was performed the vomiting ceased and did not return; the woman, who was almost *in extremis* at the time of operation, is now perfectly well.

ABDOMINAL OPERATIONS FOR UTERINE MYOMATA.

PITHA, Prague (*Wiener m. Wchns.*, 1904, No. 34-37), gives a critical review of 211 cases operated upon in Pawlik's Klinik in the years 1888-1901, where myomata are considered to be benign growths not to be interfered with, unless they cause insupportable trouble, or threaten the function of vital organs. The only abdominal operations considered were enucleation and panhysterectomy after Doyen's method. The mortality of the former was 28, of the latter 10 per cent.

COEXISTING UTERINE AND OVARIAN FIBROMYOMATA.

F. E. TAYLOR (*Edin. Med. Journ.*, June, 1904), points out that ovarian fibromyomata coexisting with uterine of the same kind are generally small. Occasionally one may in such cases meet with a large tumour, and there is then a great tendency to torsion of the pedicle.

ON CYSTS OF THE BROAD LIGAMENT.

GIBELLI, Genoa (*Archiv f. Gyn.*, Bd. lxxiii., S. 306), reports upon two egg-shaped tumours situated between the folds of the broad ligament. The inner surface of each tumour was lined with cylindrical epithelium. Gibelli attributes one of these cysts to a remnant of Wolff's duct, the other to an accessory tube. In one case drainage was secured from the lower angle of the abdominal wound, and the woman was discharged cured. The other woman, from whom a malignant tumour of the rectum had been removed

at the same time as the broad ligament cyst, died on the fourth day after the operation.

RADIOTHERAPY OF UTERINE TUMOURS.

DEUTSCH (*Muenchener m. Wchns.*, 1904, No. 37) reports the successful treatment of four cases of uterine myomata by the Röntgen rays; in all instances the tumour was materially reduced in size; in two, vesical troubles that had existed for a long time were relieved by a very few sittings; in both these cases, however, after a long series of applications, symptoms occurred resembling those supervening in the treatment of goitre with thyroid gland; the extreme emaciation, the nervous disorders (palpitation, irritability, lassitude, &c.), disappeared directly the treatment was interrupted. Severe hæmorrhages in one case were materially diminished by a series of radiations without any medical treatment. In two instances a sero-sanguineous vaginal discharge occurred directly after the radiation of the hypogastrium.

In one instance in which a uterine myoma coexisted with a larger ovarian cystoma, a rapid diminution occurred in the former after thirty applications: the ovarian tumour was comparatively little smaller. From the effect of the Röntgen rays in checking the hæmorrhage and putrid discharge in an inoperable carcinoma, they appear to palliate the effects of malignant disease, and they would certainly seem to be suitable treatment for cases of uterine myoma in which operation, not always free from danger, is contraindicated.

THE LYMPHATICS OF THE FEMALE GENITALS AND THEIR ALTERATIONS IN MALIGNANT DISEASE OF THE UTERUS.

KROEMER, Giessen (*Archiv. f. Gyn.*, Bd. lxxiii., S. 57), has investigated the course of the lymphatics in the cadaver in thirty cases, nine of which were carcinomatous. Experimental injection gave results agreeing to a surprising extent with those of Brühns and others. After discussing separately the inguinal glands, and the lymphatic vessels of the anterior abdominal wall, bladder and urethra, female genitals, anus and rectum, he proceeds to the microscopic examination of the histology of the lymphatic vessels of the uterus and its adnexa.

The study of the normal anatomy is followed by the investigation of the alteration of the lymphatic system of the uterus on the occurrence and development of a malig-

nant tumour in that organ. The results necessarily point to the necessity of strictly separating the malignant tumours of the uterus according to their seat and histological structure, and of not looking upon them all as carcinoma, for clinical observation has proved that they exhibit great variations in regard to the rapidity in which the glands become infected. The article is richly illustrated by thirty-seven figures on six plates.

THE QUESTION OF THE LYMPHATIC GLANDS AND RECURRENCE AFTER TOTAL EXTIRPATION.

MACKENRODT, Berlin (*Monats. f. Geb. u. Gyn.*, Bd. xix., Hft. 4), argues that considering the applicability of the mode of operation recommended by him, the proportion of the sixty cases of cancer reported by Schauta (*Z.*, Bd. xix., H. 4) in which a radical exeresis of the disease might have been possible, would be much more favourable. Even in the early stages at least one half of all cases are affected with evident or latent infection of the glands, and all such cases are lost unless the operation extends to the removal of the local glands.

In 95 per cent. of all cases in which the glands are infected, only those of the first line are so. The rare infections of the glands in the second line are far less dangerous in regard to local recurrence than the glands of the first line close to the cicatrix. [This is absolutely contradictory to Schauta's views.]

JUSTIFICATION OF VAGINAL TOTAL EXTIRPATION OF UTERINE CARCINOMA.

SCHAUTA, Vienna (*Monats. f. Geb. u. Gyn.*, Bd. xix., S. 475), records the results of much laborious anatomical research into the conditions of the glands in uterine cancer. In a very large number, of available subjects, examining not only those local glands which are within the range of operation, but also the lymphatics of the second line which are not within the reach of surgical interference (the lumbar, cœliac and superficial and deep inguinal glands), it appeared that in 35 per cent. of the cases in which the disease had attacked the glands of the first line, those of the second line were also carcinomatous; in 8·3 per cent. the glands of the second line were affected, though those of the first were free. In 43·3 per cent. none of the glands suffered, while it was only in 13·3 per cent. of the cases in

which the first line were diseased that the second were entirely unaffected. Hard, enlarged infiltrated glands often proved not to be cancerous, while foci of the disease were found in quite small ones; and such foci were found not only in the glands, but in the connective tissue, lymph spaces, and even in the veins between them.

These results show that the complete radical removal of carcinoma of the uterus, with all carcinomatous glands in relation with it, is possible only in the most exceptional cases in which the glands are affected at all.

In the latter part of the article Schauta gives clinical evidence in favour of the vaginal method as extended by Schuchardt's supplementary incision, and deprecates the general adoption of the abdominal radical operation, or any excessive search for cancerous glands.

THE MOST RECENT DEVELOPMENTS OF ABDOMINAL TOTAL EXTIRPATION OF THE CARCINOMATOUS UTERUS, TOGETHER WITH THE EXHIBITION OF A WOMAN OPERATED UPON IN THE YEAR 1878.

W. A. FREUND, Berlin (*Muencheuer med. Wchnschr.*, October 4, 1904), presented at the Meeting of German Naturalists and Physicians at Breslau last September, a woman, aged 53, as the earliest irrefutable instance of cure of a uterine cancer. It was ascertained by the microscopical examination of a portion of the growth removed before the operation and of the uterus itself after removal, that the case was really one of carcinoma, and not only was there a cervical cancer, but also, quite isolated from that, a cancer of the fundus uteri. The woman is up to her work, attends to her household duties, and feels well; there is a small hernia in the lower angle of the abdominal wound but no recurrence of the disease. This is by no means the only happy result Freund has had; for instance, he cited a case in which he operated twenty years ago for recurrent cancer, yet the woman has remained cured. The former of these two women he operated upon in the raised pelvis position, which is by no means new, but is depicted in a work of Scultet; healing was by first intention, and she had recovered from the operation in ten days. Although the majority of operators are now, and rightly so, preferring the abdominal route, Freund holds that too radical procedure is to be avoided. Pollaczek has already insisted that ligature

en masse should not be attempted, as it interferes with the nutrition of the parts involved and does not prevent secondary hæmorrhage.

The results of operations for mammary carcinoma, in which the disease may extend to and even penetrate the periosteum, led Freund to resort to the abdominal route, and in every case examine the glands and remove any that were enlarged. But Mackenrodt, Riess, Rumpf, Kroenig and Wertheim, go further and lay open the connective tissue and remove all the glands, enlarged or not. Poirier and others have made this operation possible by their anatomical researches, but it is still questionable whether it is possible to remove all the glands; many have aimed at removing the whole of the connective tissue, but that is quite impossible. In this direction one must not attempt too much, for cases have been known in which tumours, apparently carcinomatous, have retrograded after operation. Nor can one forget in forming a judgment upon the method of operation, that even in the hands of the most expert surgeons some other operations have a large mortality, those on the stomach, for instance, one of twenty per cent.

DOEDERLEIN, Tuebingen (*Ibid.*), said it was now possible to give a positive opinion about the abdominal operation, since according to the demand of v. Winckel, five years' observation was enough to decide on the utility of any surgical procedure. In the Klinik at Tuebingen, between October 1, 1897, and December 31, 1899, there were 151 cases of cancer of the uterus, of which 48 per cent. were operated upon by the vaginal route, and the absolute cures under five years' observation amounted to 19·6 per cent. In the year 1902-4, 172 cases were operated upon by the abdominal way, and the proportion of cures was 30 per cent. It is noteworthy that the number of cures increases with that of the cases operated upon. If the operability of all cases seen increases, the percentage of absolute cures does so also, and Schuchardt has in this respect the best results, 61 per cent. of operable cases and 24·5 per cent. of absolute cures. Doederlein himself has now, in regard to cervical carcinoma, which is admittedly much more unfavourable than cancer of the body of the womb, an operability of 44 per cent., and it may be asserted that the abdominal method has effected not only an increase in the operability, but a con-

siderable decrease in the primary mortality. By this route one is enabled to examine all the glands carefully, which is the more important because cancer often advances by great leaps along the lymphatic channels; one may, for example, find a healthy gland close to the uterus and one infiltrated with the disease much higher up. In one operation of his, two years and a half ago, the ureter was cancerous up to the kidney, and the affected parts were extirpated, and up to the present there has been no recurrence of the disease. He has also operated in a case of recurrent cancer, which has not again returned. He therefore prefers the abdominal operation.

MACKENRODT (*Ibid.*) held that five years' observation was insufficient, as recurrence might come much later. He disapproved of vaginal operation, although the recurrences were often not to be attributed to the operation, but were glandular, indeed, might affect not merely the intra-abdominal, he had seen even the inguinal glands infiltrated with the disease from a cancer of the body of the womb. The removal of the glands was therefore necessary in all cases; recurrences were met with at the root of the ligaments, deep down at their ramifications; free exposure and dissection was therefore, he thought, indispensable. The aim of the operation was to clear out the whole of the parts in the neighbourhood of the pelvic wall and the broad ligaments, including the obturator fossæ; the plexus venosus hypogastricus should be taken away, and also the fascia and lymphatic system of the levator ani, which are often the seat of recurrence. Mackenrodt said he had abandoned the median incision, which did not give a view of the important parts at all satisfactorily, and had adopted the transverse incision of the old anatomists, above and convex towards the pubes, dividing both recti and extending to the anterior spines of the ilia. The peritoneum of this flap he used to close the peritoneal cavity temporarily during the operation. He gave us his results: In the year 1900 he operated on 12 cases, 2 cases (16.6 per cent.) died from the results of the operation, another case sank after four months, from pyelonephritis. The rest remain well. In 1902, of 22 cases, 4 (18 per cent.) died from the operation, 50 per cent. under observation for between two and three years remain well, and recurrence took place in the rest. In 1900, 6 cases out of 22 died, one from pneumonia; recurrence has taken place

in 3 ; but not in the other 13 under observation for from one to two years. The number of cases operated on in 1904 was 15 ; one only died, from pneumonia ; one recurrence took place, but the other patients are all healthy up to the present. Leaving this year out of the question, but including the fatalities, the proportion of cases surviving under observation for from one to four years is 70·8 per cent.

IN THE DISCUSSION.

KUESTNER, Breslau, said that it was unnecessary to wait for statistics, as in all cases of cancer that method of attack must be best which best enabled one to operate in sound tissue. Resection of a ureter was sometimes necessary and could only be done from the abdomen.

VEIT, Halle, said that the mortality still attending operations for cancer depended not entirely on the disease itself, but upon the liability to an infection set up by streptococci present in both the cancer and the glands. Some way must be found to get rid of these micro-organisms.

PANKOW, speaking for KROENIG, of Jena, unavoidably absent, pointed out that while Wertheim's method was employed exclusively the operability had been 61·7 per cent., with a primary mortality of 3·8. But since the disease had been attacked also by the Mackenrodt-Amann plan, while the operability had increased to 87 per cent., the primary mortality had risen to 26·7. This high mortality depended on the technical difficulty of the cases so undertaken, or the amount of foul discharge. Death was generally due to sepsis, occasionally to the permanent exposure of the peritoneal cavity through the field of operation in the small pelvis. After forming peritoneal flaps it was in two cases found that the stitches had not held, in one the septum was perforated, and once, though the covering was intact, septic peritonitis supervened. The gravity of the case in which the transverse incision was used appears from the fact that in 47 operations after Wertheim's method the ureter was only resected twice, but had to be so ten times in 24 operations by the other method. No death was due to resection and implantation of the ureter, and in only one instance had the tension been so great as to interfere with the union, and the subsequent removal of the kidney necessary ; this was, however, successful.

Glands were removed in 40 per cent. of all the cases, and in 50 per cent. of these proved to be cancerous. Examina-

tion of the parametria proved that some, which clinically appeared to be free, were involved in the disease, while others, diagnosed as widely infiltrated, were entirely free from it.

The clinical course of the cases after Wertheim's operation differed from that after the transverse incision (Mackenrodt-Amann). After Wertheim's the healing of the wounds was generally good, any suppuration was for the most part limited in amount. When any cystitis occurred, it was generally slight and soon passed off, But in only three instances did the curved incision heal by first intention—in all the others there was troublesome discharge, in spite of drainage upwards and downwards. Moreover, owing to lack of abdominal pressure, and to the extensive detachment of the bladder generally required in advanced cases, obstinate and rather severe cystitis was almost the rule.

WERTHEIM, Vienna, said that as he begun his abdominal operations in 1898, he had now a certain number of cases available of more than five years' standing; he would, however, only bring forward his four-year-old statistics for comparison with those of other operators. His percentage of absolute cures, four years under observation, was 18·8, while Chrobak's was 7·4 and Schauta's 5·1 per cent. His cases three years under observation gave a percentage of absolute cures of 27·5, Chrobak's 7·4, Schauta's 6·6, and Zweifel's 10·2 per cent. The superiority of the abdominal method was amply demonstrated by these figures.

MARTIN, Greifswald, expressed himself in favour of the median incision, for twenty years ago he had tried the horseshoe incision, on other indications, and been dissatisfied with it. He thought that for the present the statistics of operations for uterine carcinoma were not to be relied upon, as the various methods of operating were not brought to sufficient perfection.

FREUND, Strassburg, approved of Mackenrodt's horseshoe incision, as affording easier access to the deeper parts, and a better view.

HOFMEIER spoke of the five years' limit as purely arbitrary, recurrences took place even after ten years. He mentioned that twenty years ago he had operated on a woman for recurrent cancer and she was now quite well.

DOEDERLEIN, in closing the discussion, said that one should in the first instance try to find the glands and remove them; should they prove to be too extensively

diseased throughout, the case was not one for radical operation. This is the best course from a practical point of view, for sometimes one makes a radical operation only to be afterwards convinced by inspection of the glands that the case was not one for operation at all. He advocated the closure of the field of operation rather than drainage. Clamping of the vagina and the antecedent cauterisation of the cancer are important factors in the result of the operation, and are therefore to be recommended.

ON THE CO-EXISTENCE OF SARCOMA AND CARCINOMA IN THE UTERUS.

NEBESKY, Innsbruck (*Archiv f. Gyn.*, Bd. lxxiii., S. 653), reports the following case: A woman of 57 was ascertained by the curette to have a sarcoma of the womb, and her uterus and adnexa were therefore removed by laparotomy. The left mamma was also amputated on account of hard nodules which were getting larger. She recovered, and examination of the mamma disclosed carcinoma. In her uterus there was a large spindle-celled sarcoma containing giant cells, and also a papillary adeno-carcinoma. Nebesky detected the co-existence of sarcoma and commencing carcinomatous degeneration in another uterus also, and is therefore inclined to think such co-existence not altogether exceptional.

THE HISTOLOGICAL CHARACTERS OF BENIGNANT CHORIONEPITHELIOMA.

V. VELITS, Pressburg (*Zeits. f. Geb. u. Gyn.*, Bd. lii., S. 301), concludes: Clinical evidence proves that chorionepithelioma with its metastases may be cured spontaneously. This peculiarity may perhaps be explained by its foetal origin, in consequence of which it is only under favourable circumstances possible for it to flourish in the maternal system. Spontaneous cure depends upon necrobiosis, which in advanced stages is perceptible to the naked eye. Microscopically spontaneous cure is evidenced by depressed vitality of Langhans' cells (little or no mitosis), and the appearance of wandering cells, which occur in exact proportion to the disappearance of Langhans' cells, and are degeneration products of the perishing chorionepithelioma and of the vesicular mole. The common characteristic of the vesicular mole and chorionepithelioma is that in both the essential factor is proliferation of the

epithelium of the chorionic villi. Since benignant vesicular moles are capable of causing vaginal metastases, but only benignant ones, in estimating the importance of these metastases and of a possibly pathological process in the uterus, we must have a clear idea constantly before us of the exact histological structure of chorionepithelioma proper.

CHORIONEPITHELIOMA : PROGNOSIS AND TREATMENT.

HAMMERSCHLAG, Koenigsberg (*Zeits. f. Geb. u. Gyn.*, Bd. lii., S. 209), gives a detailed report of five cases with a critical consideration of their histology in relation to the points at present in question. On the whole he accepts Marchand's views. He draws the following novel and interesting conclusions: Growths of chorionic epithelium in the uterus may, perhaps under the help of curettage, undergo involution. Nevertheless, a malignant tendency may have existed in the cells of the chorionic epithelium and be manifested by the formation of malignant chorionepithelioma outside the sphere of its settlement. Renewed curettage may accidentally give evidence of the unsuspecting nature of the latter, and is therefore not a sufficient basis upon which to found the clinical treatment and prognosis. A considerable time (two to five years) may elapse between the pregnancy and the fatal termination of the chorionepithelioma dependent thereon.

CHORIONEPITHELIOMA AFTER TUBAL PREGNANCY.

HINZ, Berlin (*Zeits. f. Geb. u. Gyn.*, Bd. lii., S. 97), reports a case of the above, in a quartipara, aged 33, which in its histological details did not differ from Marchand's classical case, and which developed in direct relation to the extirpation of a tubal pregnancy.

ADENOMYOMATA OF THE GENITALIA.

KLEINHANS, Prague (*Zeits. f. Geb. u. Gyn.*, Bd. lii., S. 266), reports two additional instances of genital adenomyoma. The new growth was situated, in one, in the upper third of the posterior vaginal wall extending nearly up to the portio; in the other, at the attachment of a myomatous uterus to the rectum. These cases are interesting, clinically, because too little is known about their malignity, and consequently of the prognosis of their extirpation, and, anatomi-

cally, because it is impossible to assign them a definite position in the classification of tumours.

SEMMELINK (*Zentralb. f. Gyn.*, 1904, No. 32, S. 980) exhibited a specimen in which the entire genital tract, with the exception of the tubes, was permeated with adenomyomatous elements. He agreed in the opinion enunciated by Pfannenstiel, that adenomyomata of the ovary with secondary formation of cysts might develop in the same way. Discussing the various theories of the origin of adenomyoma, especially those of v. Recklingshausen, Lockstaedt and Cullen, he inclined to the view that adenomyomata are not all equivalent, but may be derived from Wolff's ducts as well as from Mueller's, and that too much importance is not to be attached to their localisation. No remains of Gaertner's ducts could be detected in the cervix.

ADENOMYOMA OF THE UTERUS.

MURDOCH CAMERON and LEITCH (*Lancet*, July 9, 1904) give an excellent monograph upon this rare new growth, which they attribute to an ingrowth of the endometrium into the muscular tissue (*inclusio glandularis*). These inclusions not only grow themselves but lead to proliferation of the muscular tissue (*adenomyoma benignum*), from which not infrequently malignant adenoma or adenocarcinoma is developed.

PRIMARY GENITAL TUBERCULOSIS IN CHILDHOOD.

ALLARIA (*La Pediatria*, vol. xi., p. 383) has collected nineteen cases of primary tuberculosis of the female genitalia, and reports another in a girl aged 11 years, who died from pneumonia. At the autopsy the lungs were found studded with recent tubercle, and there were a few caseous nodules about the trachea. There was evidence of old tubercular peritonitis. The uterus was enlarged and its cavity distended with caseous matter, and the mucosa contained numerous tubercles. Both tubes were affected, but the ovaries were free from the disease; the vagina, external genitals and urinary tract were also free.

HYPERTROPHIC AND NON-ULCERATIVE FORM OF VULVAR TUBERCULOSIS.

PETIT and BENDER, Paris (*Revue de Gyn.*, Tom. vii., 6), report the occurrence, and recurrence after excision, of an elephantoid growth principally affecting the labia majora

and minora of a woman, aged 31. The microscopic appearance was characterised by the absence of any ulceration, by the disappearance of the sebaceous glands, by extreme œdema of the corium, and by more or less numerous, and generally deeply seated, tubercles with foci of small-celled infiltration containing plasma cells and mast-cells. A few tubercle bacilli were present. The case is analogous to one reported by Pöeverlein (I.D., *München*, 1902), which, from there being no ulceration, was clinically pronounced to be sarcoma.

OVULAR FORMS IN OVARIAN CANCER.

LIEPMAN, Berlin (*Zeits. f. Geb. u. Gyn.*, Bd. lii., S. 248), explains the structures resembling ova in ovarian tumours as products of retrogressive metamorphosis. They cannot be ovular, as supposed by some, for apart from the fact that they would then represent biological monstrosities, minute study of their histological structure, comparative microscopical measurements, and the existence of similar "ova" in a series of tumours in no way related to the ovaries, prove that the description of the egg-like formations in ovarian tumours as true ova is altogether incorrect.

THE PATHOLOGICAL HISTOLOGY OF CHRONIC OOPHORITIS.

PINTO, Dresden (*Zentralb. f. Gyn.*, 1904, No. 23), has made careful histological examination of twelve cases of chronic inflammation of the adnexa from Leopold's Klinik, and makes a preliminary report of the results to the following effect.

There is no basis for the division of chronic oöphoritis into interstitial and parenchymatous forms; the changes affect stroma and follicles alike. In some instances the inflammatory process invades the ovarian tissue by contiguity (*e.g.*, after precedent tubal disease) and extends gradually from the surface to the deeper layers of tissue; in others the pathogenic germs reach the ovary by the blood-vessels and lymphatics of the hilum.

In the former case, the lesions are confined to the cortical substance; in the latter, they are more disseminated; the stroma, the vessels and the medullary substance are more involved in the disease, and consequently the follicles are also modified. The lesions are parenchymatous

as well as interstitial in both. In the former the oophoritis may be called "cortical," in the latter "diffuse."

In *Cortical Oophoritis*, the ovary is of normal size with superficial adhesions. The tunica albuginea is more or less thickened. In the stroma of recent cases there is small-celled infiltration, especially round the vessels; in older cases part of the spindle-celled connective tissue is transformed into a fibrous tissue poor in cells, and it is only here and there that one finds patches of sound tissue containing primary follicles. These are always diminished in number; those which still persist may be normal or may show the effects of chromatolysis, atrophy of the nucleus and liquefaction of the protoplasm. The more superficial Graafian follicles in process of development undergo more or less alteration of the epithelium and ovum. Some of those most deeply situated appear normal. Many follicles are in process of occlusion, others appear as cysts visible to the naked eye. But the number of these follicles does not exceed that in a normal ovary; the epithelium and ova may be normal or more or less changed. In this form of oophoritis the medullary substance is but little, if at all, altered.

In *Diffuse Oophoritis* the ovary is prone to be small and furrowed on the surface. In cases not too old, the cortical substance shows a hyperplasia of the stroma with more or less diminution in the number of primary follicles. In old cases the cortical matter is atrophied. The number of Graafian follicles is always diminished; they may be normal, or show atresic or cystic degeneration; but the follicular changes, generally, are less pronounced than in the other form of oophoritis. In the medullary substance, in recent cases, processes of hyperplasia have been found in the stroma; in the older cases, on the other hand, the connective tissue of the stroma is dense and poor in cells. The vessels are commonly very numerous; some exhibit hyaline degeneration of the media and intima, others the effects of endarteritis obliterans, or perivascular sclerosis. Marked dilatation of the lymphatic vessels is sometimes seen also, more frequently hæmorrhagic foci in the stroma as well as in the follicles; more rarely foci of small-celled infiltration. Usually this diffuse form of oophoritis corresponds with the so-called interstitial oophoritis and ultimately leads to sclerosis of the ovary (premature senility of the ovary, according to Bulius). In some cases one must

suppose that both forms of öophoritis are associated. It is worth noticing that one finds a certain number of normal follicles even in very advanced instances of both forms of inflammation.

Pinto cannot accept the views of Martin and Orthmann, who describe one form of öophoritis with lesions limited to the organ itself, and another including the surface and surrounding parts in the inflammation and consecutive to a periöophoritis adhesiva. He does not believe that microcystic degeneration is associated with a chronic inflammatory process in the ovary. Whether, as Martin holds, universal öophoritis (*i.e.*, microcystic degeneration) shall be considered a chronic inflammation, in which, in consequence of a periöophoritis adhesiva, the surface and surrounding parts are involved, is an open question.

In view of its origin and microscopical anatomy, Pinto accepts two forms of öophoritis (1) a cortical, (2) a diffuse. Infection, either gonorrhœal or puerperal, takes the first place in their etiology. Menstrual troubles, abnormal ways of gratifying sexual instinct, chlorosis, pelvic tumours, which have been advanced as causing the disease by interfering with the circulation, Pinto considers rather as predisposing conditions favourable to infection.

HERNIA OF THE OVARY WITH TORSION OF THE PEDICLE.

GAUGELE (*Deutsche Zeits. f. Chir.*, Bd. lxxiii., S. 216) reports a case of the above which is of interest, as, although he has found only eight others recorded, the accident is probably less uncommon than has been supposed; that is to say, an intrasaccular torsion without strangulation, the twisted part of the pedicle not corresponding with the neck of the sac, but being generally at some distance below it.

A female infant, 8 months old, was brought to the Herzog's Pædiatric Klinik at Munich on December 3, 1903. From birth she had had a small inguinal tumour on the left side, easily reducible by the mother, but the previous evening this tumour had become much larger, and could no longer be returned into the abdomen. It was twice the size of a pigeon's egg, very hard and tender on pressure. There was no abdominal trouble, and the child's general condition was so nearly normal that strangulation of the bowel was most improbable, and they therefore concluded that some other viscus, the ovary or uterus, must be in-

carcerated. An operation was performed immediately, a hard, smooth, bluish tumour was exposed, covered by a fold of peritoneum, to which it was adherent. It was continued into a pedicle at the neck of the sac, quite normal in appearance and quite free, but blackish a little lower down. This discoloured portion was found to be a zone of torsion, and the tumour to consist of an ovary six times as large as usual at the child's age, together with the corresponding tube. As the lesions were too far advanced for conservative treatment, the pedicle was ligatured in the sound portion and the tumour removed. Recovery was uneventful. Comparing this case with the other eight collected ones, Gaugele concludes that though as yet the diagnosis has never been made before the operation, clinical analysis gives data enough for it. In the first place the subjects were all very young, less than a year old in six cases out of the eight, the others being respectively 3 and 5 years old. They were all cases of congenital inguinal hernia, most of them of the right side. The size, ovoid shape, and the hardness of the hernial tumour, in the first place suggest the nature of the contents, but what above all should attract attention is the absence of any intestinal symptoms, characteristic vomiting, arrest of fæces, or tympanitis, and also the fact that the general system is hardly affected, which would contrast strangely with the supposition of an incarceration of the bowel. It is to be noticed that such torsion within the sac provokes far less reaction than torsion within the abdomen. Immediate operation is, of course, indicated, and is the only chance of saving the ovary.

ENDOTHELIOMA LYMPHATICUM OVARII.

HEINRICIUS, Helsingfors (*Archiv f. Gyn.*, Bd., lxxiii., S. 323), reports a case in which a solid ovarian tumour was removed from a woman aged 32, the other ovary, healthy in appearance, being left. The woman died eight months after leaving hospital, as it was said, from abdominal cancer. On the ground of microscopical evidence Heinricius supposes that the tumour removed originated from the endothelium of the lymph spaces or smaller lymphatic vessels.

ENDOTHELIOMA OVARII, WITH UTERINE AND GLANDULAR METASTASES.

FEDERLIN, Strassburg (*Hegar's Beitræge*, Bd. viii., Hft. 2), describes two cystic ovarian tumours, clinically resembling

cystosarcoma or carcinoma, removed by laparotomy, together with a uterus containing similar nodules and the greatly enlarged inguinal glands of the right side. Microscopical examination proved that the case was one of hæmangiosarcoma of both ovaries, with metastases in the uterus and inguinal glands. No instance of the kind has been previously recorded.

TWO SOLID OVARIAN EMBRYOMATA.

ROTHER, Breslau (*Monats. f. Geb. u. Gyn.*, Bd. xix., S. 799), reports two cases, from which he concludes that it is impossible to draw a definite distinction between teratomata and dermoid cysts. There is no fundamental difference between embryomata and dermoid cysts; nor do we know the causes which lead, in the one case, to a solid proliferating, and in the other, to an enlarging cystic tumour.

ON THE FATE OF PERITONEAL IMPLANTATIONS FROM PAPILLARY OVARIAN CYSTOMATA.

HOLLINGER (I. D. Muenchen, 1903; *Zentralb. f. Gyn.*, 1904, No. 42) reports: a patient in Theilhaber's Klinik, aged 40, had been conscious for three months of a rapidly enlarging tumour in her abdomen, which was diagnosed as an ovarian tumour of the right side. The diagnosis was confirmed by operation, the left ovary was left behind. On the intestinal serosa there were dispersed small white nodules; there was ascites; the outer surface of the tumour was smooth, its inner surface covered with numerous papillary excrescences. The patient did very well after the operation, but ten years later returned with a cystic abdominal tumour which, like the other, was removed by operation, and proved to be a papillary growth of the left ovary, of the same microscopical structure as the former one. The intestinal serosa, however, was perfectly free from the numerous nodules it had formerly contained.

CARCINOMATOUS PAPILLARY OVARIAN CYSTOMATA RUP- TURED INTO THE PERITONEAL CAVITY.

LEVI (*Archivio di Obst. e Gin.*, May, 1904) gives a full account of a case of the above, which came under his own notice, with a detailed description of the microscopical characters of the tumour removed by operation, and from the study of this case and the literature of the subject, he

draws the following conclusions : (1) Carcinomatous cysts of the ovary may develop at any period of life ; (2) they originate in the cells of the tubes of Pflüger, as do also the papillomata of the germinal epithelium of the ovary ; (3) histologically, cancerous cysts are difficult to distinguish from papillomata, but can be recognised when masses of atypical epithelial elements are found ; (4) a papilloma which at first has a benign course may degenerate into a carcinomatous form ; (5) the rupture of a cystic tumour into the peritoneal cavity may pass unobserved owing to the absence of definite symptoms ; (6) the liquid of carcinomatous cysts, apart from suppuration, is not of a septic nature ; at all events the germs it contains are not pathogenic ; (7) the prognosis of every ovarian tumour ought to be guarded, because it is not possible to exclude, with any certainty, the possibility of malignancy ; (8) the treatment should be the operative removal of all that is suspected ; (9) in recurrent and in very advanced cases complicated with numerous metastases, it is better not to interfere, as the operation may have a fatal result.

F. E.

PAROVARIAN CYST.

NAGEL (*Zentralb. f. Gyn.*, 1904, No. 33, S. 1,000) recently exhibited at the Berlin Obstetric and Gynæcological Society, a single chambered parovarian cyst of the right side, of the capacity of 33 litres, successfully removed by laparotomy from a woman aged 52. The largest cyst of the kind hitherto recorded (Jeanbran and Moitessier) contained 23 litres. This large cyst was completely invested with peritoneum, which could be stripped off the wall of the sac as a separate membrane. The ovary was intact, standing prominently out from the sac wall, and under the microscope showed characteristic structure (stroma, Graafian follicles and corpora albicantia) ; the ovarian ligament proper passed from it to the uterus. The tube, greatly stretched longitudinally, was in an atrophied condition, exhibiting the microscopic changes of senile atrophy as described by Ballantyne ; the closed fimbriated end was gradually lost in the wall of the cyst.

THE PERMEABILITY OF THE TUBES BY FLUIDS INJECTED INTO THE UTERUS, ESPECIALLY IN REGARD TO EXPERIMENTAL TRIALS UPON THE LIVING.

THORN (*Zentralb. f. Gyn.*, 1904, No. 38) has been using Braun's syringe for 22 years without any serious accidents,

such as have led Doederlein and Zweifel to consider the intra-uterine injection of caustics to be dangerous. He says that if the cervix be sufficiently dilated the injected fluid will not find its way into the tubes, and that under any circumstances it is most exceptional for it to do so. In six cases of extirpation of the uterus he injected tincture of iodine and a solution of methyl violet without any precautions immediately before performing vaginal panhysterectomy. In the first five he found nothing in the tubes, and in the sixth merely a slight discolouration in the interior of the left tube, which he attributed to diffusion of the colouring matter. He considers it fallacious to apply to the living deductions made from experiments on the cadaver, in which contractions of the cornua do not happen. The contradiction of Doederlein and Zweifel's experience by Thorn's, needs elucidation by further experiments.

SOUNDING THE TUBE AND UTERINE PERFORATIONS.

THORN, Magdeburg (*Zentralb. f. Gyn.*, 1904, No. 36), finds it impossible in the cadaver to introduce an ordinary uterine sound into the lumen of the isthmus of the normal tube when the parts are *in situ*, or removed from the body, and sets down all alleged instances of sounding the tube in the living body as cases of perforation of the uterus, esteeming this to be absolutely certain in normal or puerperal uteri. Even when the uterus was inverted (four cases) he could not sound the tube; he was, however, able to do so in a large myomatous uterus, as was proved when total extirpation was afterwards performed. He gives as indispensable conditions for the sounding of the tube, an abnormal width of the lumen of the tube, especially of the ostium uterinum, and of the interstitial portion, resisting power of the walls, and dilatation and an erect position of the uterine horn. These conditions are fulfilled, as four unobjectionable published cases prove, by myomata or by malformations of the uterus.

SUPPURATIVE ADNEXAL DISEASE CONSEQUENT ON ENTERIC FEVER.

DIRMOSER, Vienna (*Zentralb. f. Gyn.*, 1904, No. 40), quotes a case of Joseph Koch's to show that pyosalpinx need not necessarily be due to the streptococcus, gonococcus, or tubercle bacillus, but may be caused by the *B. typhosus*, and

describes a second case, a maiden, aged 20, who six months after a severe attack of enteric fever was found, on laparotomy, to have a suppurating ovary on the right side and a pyosalpinx on the left. The pus contained typhus bacilli, which must have found their way from the large intestine to the tube and ovary along the lymphatics.

A very interesting case is noticed in the *Lancet* of August 6. DARNALL (*four. Amer. Med. Ass.*, July 2, 1904) reports: A., aged 30, fell ill on May 21, took to her bed on June 9, and was attacked with severe diarrhoea, when her temperature was 103°. At 8 p.m. that evening her temperature was 105°, and metrorrhagia began. Menstruation had occurred two weeks previously and had always been regular. The enteric developed and the Widal reaction was obtained. Ergot was given and the vagina packed with gauze, which checked the hæmorrhage. Exitus on June 16. At the autopsy no cause for the hæmorrhage could be found in the uterus, the appendages appeared to be normal.

TUBAL PREGNANCY.

ZUNTZ, Berlin (*Archiv f. Gyn.*, Bd. lxxiii., S. 22), reports upon 100 cases of extrauterine pregnancy, in two-thirds of which precedent inflammatory conditions in the genitalia had existed, and possibly were the cause of the anomaly; in such conditions, however, gonorrhoea was by no means so common as puerperal infection. To determine the diagnosis he recommends exploratory puncture from the vagina. All cases except ten were operated upon, four by vaginal incision, all the others by laparotomy, and thirteen out of the eighty-six ended fatally.

TWO UNUSUAL CASES OF TUBAL PREGNANCY.

VOIGT, Goettingen (*Monats. f. Geb. u. Gynaek.*, Bd. xix., S. 791), reports a case of tubo-abdominal pregnancy in which, after the rupture of the wall of the tube, the development of the unbroken ovum had continued, and formations were found at the placental seat which in structure were intermediate between the normal growths of the foetal elements and that of chorion epithelioma. It might be supposed that they represented a transition towards malignant new growth. In another case tubal pregnancy coexisted with complete occlusion of the fimbrial end of the tube. When abortion occurred the blood, after filling up the tube, forced its way

into the ovary and discharged itself through a corpus luteum cyst into the abdominal cavity.

AMPULLARY TUBAL PREGNANCY WITH TORSION OF THE PEDICLE : LAPAROTOMY : RECOVERY.

BIDONE (*Bull. Soc. Med. Bologna*, 1904, Fasc. 6), reported a case which, as he could only find five similar ones recorded, he thought important from its rarity. There was a tumour at the left side of the pelvis, evidently formed from the dilated ampulla of the tube at the part corresponding to the isthmus, the pedicle was twisted rather more than one revolution to the left. The pavilion was obliterated and the external surface of the foetal sac was roughened, but entire. There was no blood nor any residue of precedent effusion in the peritoneal cavity. The sac when opened showed marked turgidity of the veins, and in two places extravasation of blood within its wall corresponding to the tubal decidua. The foetus, from 3·5 to 4 months' development, had not been long dead, and was well-preserved and fresh.

According to Bidone, the symptoms of torsion of the pedicle of a gravid tube are similar to, but more serious and explosive than, those associated with the torsion of an ovarian cyst.

In short, owing to the arrest of circulation in the gravid tube alterations take place in its peritoneal investment, which soon lead to the formation of adhesions with the other viscera, or with the parietal peritoneum where it is in contact with the foetal sac, and the new vessels formed in these adhesions may, in some measure, contribute to the nourishment of the sac. [Cf. Bedford Fenwick's case, *ante*, p. 256].

SECONDARY ABDOMINAL PREGNANCY.

PRUESMANN, Berlin (*Zeits. f. Geb. u. Gyn.*, Bd. lii., S. 288), reports two cases: In the first a pregnancy in the left tube developed within the ligament, the sac ruptured and the contents escaped into the peritoneal cavity. Development continued fourteen days beyond term before pains came on, and a live child was extracted from the coelom by laparotomy; the placenta was firmly adherent to the peritoneum and intestines, and could not be removed. The patient died from collapse shortly after the operation. In the second

case, an interstitial pregnancy on the right side afterwards becoming abdominal, a mummified seven months' fœtus was retained for a whole year; the woman recovered after laparotomy.

PESTALOZZA (*La Ginecologia*, 1904, No. 2; *B.M.J.*, E. ii. 170) operated on a case in which the fœtus lay in Douglas' pouch, the placenta in the ampulla of the tube, the cord passing out of the ostium. He compares it with a case described by Leopold in which a fœtus expelled from a ruptured uterus continued to develop in Douglas' pouch.

OVARIAN PREGNANCY.

MERKEL (*Muenchener m. Wchs.* 1903, No. 34) recently reported the following case: A woman, aged 39, who had born one child on January 2, was submitted to laparotomy on June 24, on account of internal hæmorrhage attributed to a ruptured ectopic gestation. The tumour was found in the right adnexa; transversely and adherent upon it lay the long and very crooked, but otherwise normal, vermiform appendix, which was detached without cutting, and the right adnexa were then removed. The tube and ovary on the left side were quite normal. The patient made a rapid recovery. On investigating the specimen it appeared that the right tube was somewhat twisted but otherwise quite normal, especially so at its fimbriated extremity; the infundibulo-ovarian ligament was intact. Of the right ovary a certain portion was preserved, seated like a skull cap on the soft tumour, which was of the size of a hen's egg. The only evident opening in the tumour corresponded to the detached appendix, but on the side which (*in situ*) had been turned to Douglas' pouch there was a small aperture with tattered edges, out of which fresh blood was oozing, and this no doubt was the rupture. The case fulfils all Leopold's conditions. The ovary of the same side was deficient and continuous with the sac; the sac was connected with the uterus by the ovarian ligament, and neither the tube nor the infundibulo-ovarian ligament was involved.

In "Martin's Diseases of the Ovary," 1899, Orthmann enumerated thirty-one cases of ovarian pregnancy, but Fueth, writing in 1902, admitted only twenty-one. Merkel's case, and those published by Wathen, Machenhauer, Thompson, Mayo-Robson, Simon and Condamin, bring the number up to twenty-eight. The only possible seat for the ovum to

develop within the ovary, is the mature or recently ruptured follicle; penetration of a still unruptured though greatly thinned wall of a follicle Klob declares to be impossible.

PLACENTATION IN WOMAN.

FRIOLET, Basle (*Hegar's Beitrage*, Bd. ix., Hft. 1), after verification of the work of others and some original researches, comes to the following conclusions: The ovum buries itself in the mucosa and is not, as was believed, walled in by the cells of the mucous membrane. The intervillous space probably arises after the manner of the formation of a massive trophoblastic calyx, and afterwards becomes altered into a blood space with an interspersed scaffolding, and from the members of this scaffold the chorionic villi are formed by the ingrowth of the foetal mesoblast of the wall of the germinal vesicle. The intervillous space has nothing to do with the cavum uteri, and undoubtedly from the beginning has the function of a blood sinus. The villous epithelium in its early stages consists of a double layer of cells, Langhans' layer and the syncytium, the latter probably derived from the foetal ectoderm, with fine ciliae externally. The question of the origin of the syncytium is unsettled, but Friolet's own researches all suggest that it is derived from the trophoblast. When fully formed the syncytium appears to be independent of Langhans' layer.

BICORNUOUS UTERUS; LEFT HORN CONTAINING A SEVEN MONTHS' MACERATED FÆTUS, REMOVED WITHOUT INTERRUPTION OF A FOUR MONTHS' PREGNANCY.

KOUWER (*Zentralb. f. Gyn.*, 1904, No. 32, S. 978) recently exhibited at the Netherlands Gynecological Society the above-mentioned. The patient had had five normal labours; she had suckled her last child for eighteen months, had then had two normal menstruations followed by seven months' amenorrhœa. Hæmorrhage for five months led her to the klinik. The diagnosis of the pregnancy in the right horn was not difficult, but the nature of the tumour on the left side could only be determined on laparotomy.

THE HEART AND CIRCULATION IN PREGNANCY.

STENGEL and STANTON (*Univ. Penna. Med. Bull.*, 1904, Sept.), after reviewing the evidence that has been advanced bearing on the alleged hypertrophy of the heart during

pregnancy, conclude from the clinical study of upwards of seventy cases under the care of Barton Cooke Hirst, in the maternity department of the University Hospital, Pennsylvania, that there is not, during pregnancy, any hypertrophy of the left ventricle, nor any special increase in its work. The increase in dulness to the left is due to the upward displacement of the diaphragm and consequent displacement of the heart upwards and outwards. Comparison of the outlines before and after labour show a rapid return to the normal position. An extension of the area of dulness to the left, and distinct pulsation, was frequently noted in the second and third interspaces, probably due to distension of the conus arteriosus and root of the pulmonary artery. This is the more probable, as a systolic murmur was often clearly audible over the same area. Moreover, the right border of the heart was, on the average, too far to the right; there is probably, therefore, some continuous dilatation of the right ventricle to an apparently moderate extent during the later months of pregnancy.

In multiparæ, the separation of the recti during pregnancy diminishes the tendency of the diaphragm, and consequently of the heart, to displacement, but after delivery may lead to a downward displacement of the apex, and though the first position of the heart may not have been far from normal, the contrast between the positions before and after labour may be as pronounced as in primiparæ. If the diastasis be not considerable and the muscles regain their tone, the heart and its apex may be restored to their normal position.

During labour, the blood pressure is sometimes notably increased, but there is no material increase in pressure either before or after labour.

MACKENZIE, Burnley (*Brit. Med. Journ.*, 1904, Feb., 921), concludes, in regard to pregnancy occurring in women with valvular disease, that: (1) When there is distinct evidence of failure of compensation, or when the patient is liable to frequent attacks of failure of compensation, pregnancy should be forbidden. (2) With fair compensation, if there should be paralysis of the auricle, as evidenced by the presence of a diastolic murmur and the absence of a presystolic murmur, or of a continued irregularity of the pulse, or of a jugular pulse of the ventricular type, pregnancy should be forbidden. (3) With fair compensation,

with a mitral murmur systolic or presystolic in time, with the apex beat within the nipple line, and due to the left ventricle, the patient may undertake the burden of pregnancy. In all cases of valvular disease, when conception has taken place, the patient should be kept under close observation. One feature of great prognostic significance is the presence or absence of symptoms of œdema of the lungs.

PSYCHOSIS IN PREGNANCY : INDUCED ABORTION :
RECOVERY.

TREUB, Amsterdam (*Zentralb. f. Gyn.*, 1904, No. 23), reports : A quartipara of 31, influenced by reading "Notre Dame de Paris," had, from the beginning of her pregnancy, the fixed idea that the child would be a monster ; she refused food so as not to feed it, and could not sleep because she could hear it cry "like someone being choked." She attempted suicide by throwing herself under a train. After some days' observation in hospital, the induction of abortion was decided upon. A laminaria tent was introduced, and she immediately appeared to be better, slept pretty well that night, though she dreamed that the monster had cried out because a pin had been stuck in its head. Two days afterwards the uterus was emptied under anæsthesia. She slept well, took her food, and was soon absolutely normal, and in a fortnight was discharged cured. Alienists do not, as a rule, expect much benefit from induced abortion in the psychoses of pregnancy.

THE ALBUMINURIA OF PREGNANCY.

LITTLE (*Amer. Journ. Obst.*, September, 1904), has made a statistical study of the albuminuria of pregnancy, labour, and the puerperium, and he concludes from his tables thus :—

Albumin is noted in the catheterised specimens of urine from one half of all pregnant women, and is equally frequent in primiparæ and multiparæ. Casts apparently occur with greater frequency in multiparæ. At the time of labour there is a marked increase in the albumin alone, and in the albumin associated with casts, the increase being specially marked in primiparæ ; this may be due to the muscular work and to the increase of blood pressure during labour. It is unusual to find casts present without albumin ; but it

must be borne in mind that the quantity of albumin may be too small for easy recognition. Albumin and casts are found in the puerperium less often than in pregnancy; in no case was albumin present during pregnancy and absent at the time of labour, while there were only three cases showing casts in pregnancy and not in labour. On the other hand, two-thirds of the cases showing casts at time of labour had had albuminuria during pregnancy. In nine cases of threatened eclampsia, and in twenty-five others with definite eclampsia, albumin was invariably present. The case of hyperesis gravidarum showed much albumin and many casts. Nausea and vomiting were noted in 20 per cent. of the primiparæ, and 33·3 per cent. of the multiparæ, who, later on, showed albuminuria. In 71 per cent. of the cases the first note of the condition was made within the last eight weeks of pregnancy.

J. T. J.

ECLAMPSIA AND ITS TREATMENT.

KERMAUNER, Heidelberg (*Zentralb. f. Gyn.*, 1904, No. 36), reports on the conservative treatment of eclampsia in the Heidelberg Klinik by hot baths, packing, injections, infusions of salt solution in the usual way, and, in cyanosis, by venesection, and, on the occurrence of more serious symptoms, by the induction of labour. He refers to nine cases, six during pregnancy, three in childbed. Two of the former and one of the latter were fatal. The cases occurring in childbed are an absolute proof that emptying the uterus is not in itself a cure for the disease.

ECLAMPSIA AND CÆSAREAN SECTION.

HALLIDAY CROOM (*Brit. Med. Jour.*, 1904, June 18) recently reported to the Edinburgh Obstetrical Society two cases in which he had performed Cæsarean section on account of eclampsia, and reviewed a series of fifty-four collected cases. The maternal mortality of 50 per cent. he attributed to the desperate condition of the patients at the time of the operation. He held that the uterus in eclampsia should be emptied as quickly as possible, and that Cæsarean section was the best method of doing it.

HAMMERSCHLAG, Koenigsberg (*Zentralb. f. Gyn.*, 1904, No. 36), reports four cases, two fatal and two successful, of anterior vaginal hysterotomy (Bumm) combined with version

and extraction. The subsequent tamponade recommended by Duehrssen he would adopt only when necessary. He has found twenty-one cases recorded with nine deaths, a mortality of 43 per cent., compared with 55 per cent., including 12 per cent. from sepsis, after the abdominal operation. He admits the operation to be indicated in the most severe cases of eclampsia with a rigid cervix; in others he would employ Bossi's dilator.

MALY, Reschenberg (*Zentralb. f. Gyn.*, 1904, No. 34), reports a successful Duehrssen operation on a quintipara eclamptic, aged 27.

ECLAMPSIA IN THE FIFTH MONTH OF PREGNANCY WITHOUT FŒTUS : HYDATID MOLE.

HITSCHMANN, Vienna (*Zentralb. f. Gyn.*, 1904, No. 37), relates as unique, and as proving that eclampsia may occur independently of any foetal metabolism, the following case : A secundipara, aged 18, was attacked by eclampsia when four and a half months pregnant, and was delivered of an hydatid mole. Fehling's theory, according to which the intoxicating material in this disease is the product of metabolic changes in the foetus, is not valid for all cases. Hitschmann holds that it is to be sought for in the foetal portions of the ovum, and Veit also has latterly inclined to this view.

DIAGNOSIS OF CONTRACTED PELVIS IN THE LIVING WOMAN.

SELLHEIM (*Zeits. f. Geb. u. Gyn.* Bd. li., Hft. 3, p. 395), in discussing the limit of pelvic space upon which an obstetrician is justified in relying for the safe natural spontaneous delivery of a full-term living child, asks himself this question : Is the application of forceps necessary when the useful diameter of the pelvis (the conjugata vera) is 8 or even only 7 centimetres? He also criticises the methods of measurement generally used, and suggests modifications.

(1) *Examination of the inferior strait of the pelvis.*—The most important region of the inferior strait is that which is limited by the ischio-pubic rami. Upon its conformation, more or less in accord with the projection of the sub-occiput in its process of expulsion, depends the greater or less utilisation of the space offered to the foetal head during labour. The examination of a great number of pelvis show

a complete series of intermediary forms, from the right angle with rectilinear sides to a well-curved arc, the most favourable being those which conform to the shape of the sub-occiput, a small unfilled space under the angle of the pubic arch having the advantage of protecting the urethra. By introducing the two thumbs into the vagina, the patient being in the obstetrical (dorsal) position, it is possible to map out the pubic arch and to form a good idea of the shape and direction of the pubic curve, of the possibility of a spontaneous delivery, and also of the risk of rupture to which the soft parts are exposed.

(2) *Superior strait.*—All deductions drawn from external measurement must be regarded as unreliable for the appreciation of the internal diameters of the superior strait. This conclusion has been arrived at by Sellheim, after the examination of eighty pelvises in the dry state. The routine method of deducting 1·5 to 2 centimetres from the diagonal conjugate to obtain the true conjugate diameter, often leads to erroneous results. Internal exploration is, therefore, the only method of appreciating correctly the form and dimension of the superior strait.

(3) *Transverse diameter of the superior strait.*—The author, like Kehrer, considers that the most important transverse diameter is that in which the foetal head in its progression presents its long diameter, *viz.*, the pelvic transverse diameter nearer the symphysis, and he has utilised for his observations a foetal head deformed by its passage through a flat pelvis, and compared its shape with that of the arch formed by the symphysis pubis, and the space allowable in its descent under the ischio-pubic arch, taking account of any compensating room transversely for any lateral compression of the head. Here, again, digital examination affords to the experienced obstetrician a rapid guide as to whether a case under examination is one with a pelvis normal, rachitic, or justo-minor.

The applicability of this method of diagnosis has been tested by submitting to it all the women admitted into the gynæcological and obstetrical sections of the hospital. At first all the explorations were made by Hegar, but later on the first explorations were made by the author, and the control explorations by Hegar.

Results.—During the last ten years, 8,400 cases were minutely examined, and 211, or 2·5 per cent., were found to have contracted pelvises. Of these 118, or 55·92 per cent.,

were flat with a maximum true conjugate diameter of 9.5 centimetres, and 93, or 44.08 per cent., generally contracted with a maximum true conjugate diameter of 10 centimetres. Of the flat pelves, 95 per cent. were rachitic, the others were infantile, a few with traces of rachitism. Of the generally contracted pelves, 57 per cent. were rachitic, 18 per cent. of infantile type with traces of rachitism, and about 6 or 7 per cent. showed no traces of rachitism or of infantile type. In the flat pelves, the limit for spontaneous delivery was 7.95 centimetres; a living child was extracted in a case of a diameter of 7.25 cm., and there was a case of forceps delivery with a diameter of 7.5 cm.

The limits for spontaneous delivery in the generally contracted pelves was 8 cm. or even less for rachitic cases; and 8.5 cm. for the infantile type and the generally and regularly contracted.

In rachitic pelves, living children were extracted when the true conjugate diameter did not exceed 8 cm., and in forceps cases 7.7 cm., whereas in infantile pelves these limits were 8.5 cm., and 8.1 cm. respectively,

P. Z. H.

PROPHYLACTIC VERSION IN CASES OF PELVIC CONTRACTION.

BRUNO WOLFF (*Berliner Klinik*, October, 1904, Heft. 196) defines version to be strictly speaking prophylactic only when, the head presenting and the pelvis being contracted, the operation is performed before any trouble has arisen in the condition of the mother or child, to avoid dangers which may possibly occur if the labour is allowed to proceed with the child's head first. The proceeding was based by its founder, Simpson, on the idea that the smaller end of the cone going first, an after-coming head would pass through a flat pelvis more easily than a head first; moreover, in the former case the child's body is of material assistance in extracting the head. When performed before the membranes have ruptured, and when the os is quite dilated, version is a comparatively simple and easy proceeding; injury to the soft parts is most exceptional, and delivery is rapidly completed. On the other hand, labour, if allowed to proceed head first, may be prolonged for hours or days, and finally either a deferred version, high forceps, symphyseotomy, or craniotomy, all much more serious proceedings for mother and child than early version, may

have to be faced. It is peculiarly in private practice that this is of moment; indeed, as regards symphysiotomy, Hofmeier has declared, and all German obstetricians agree, that it has no place in private practice. Against turning it has been urged that the moulding of the aftercoming head is far from favourable to the child, and that the latter, when extraction is difficult, is very liable to serious injury. Even those obstetricians who do not condemn prophylactic version altogether, are not by any means like-minded as to the indications for it. Some do it in the interest of both mother and child, or more especially in that of child (Gusserow, Nagel, Leopold, Runge), others perform it chiefly or exclusively for the sake of the mother (Schroeder, Olshausen, Fritsch, Bumm). Some confine it to moderately contracted pelvis (C.V. not less than 8 cm.) others reserve it, by preference or exclusively, for more pronounced contraction. Opinions differ also as to whether the proceeding is adapted more especially to the flat pelvis, or to the pelvis *justo minor*. It is generally deemed unsuitable for primiparæ, but Runge and Duehrssen perform it even in such—Duehrssen supplementing it with lateral incisions in the introitus and, if need be, in the cervix. Most unfavourable opinions have recently been expressed on prophylactic version by Kroenig and Menge (Leipsic), Ludwig and Savor (Vienna), and Henkel (Berlin), but it has been warmly defended by Albert, Krull and v. Magnus, and by Wolff himself, who points out that in the extern maternity of the Charité Hospital during the years 1892-1902, labour was conducted in 581 women with contracted pelvis; version was performed in 243; prophylactically in 54 instances. Wolff compares the results of these prophylactic versions with each other and with those of expectant treatment, and finds that there was a very marked difference according as the pelvic contraction was of the first grade only (C.V. = 8 cm.) or not, and also according to whether the operation was done under favourable circumstances, intact membranes and fully dilated cervix, or otherwise. The mortality of the children, when the membranes were unbroken, the cervix fully dilated and the contraction only of the first degree, was absolutely nil (30 cases) while the labours with the same degree of pelvic contraction which were allowed to proceed head first (85 cases), showed a mortality for the children of 9.4 per cent. When the version was not done till after the rupture of the membranes, the results were not

so good as those of the expectant treatment. When the contraction of the pelvis was greater than of the first degree (C. V. = 8 cm.), prophylactic version, whether it was performed before or after the rupture of the membranes, gave no better results than expectant treatment. The number of such cases was, however, too small to justify any definite deductions. Wolff concludes: In the conduct of labour in contracted pelvis, whether prophylactic version is to be undertaken or not, it is of chiefest importance to prevent the rupture of the membranes before the mouth of the womb has become fully dilated, perhaps by the introduction of a colpeurynter into the vagina. When this can be done the conditions are most favourable for expectant treatment, as well as for version and extraction. Prophylactic version should not be undertaken after—certainly not long after—the rupture of the membranes, nor unless the os uteri is sufficiently dilated to admit of the extraction of the child immediately after turning. But it is by no means in every case of contracted pelvis, even when the membranes are intact and the cervix almost or quite fully dilated, that prophylactic version is in place. Version is always more difficult in primiparæ, in whom, moreover, the chances of satisfactory delivery of the child head first are more favourable; it is better therefore to abstain in primiparæ from this interference. And even in multiparæ sometimes before the waters come away the os has fully dilated and the head has engaged so favourably that a happy, and, after the rupture of the membranes, an expeditious course of the labour may be relied on. In such cases one would of course not interfere with the position. Yet in a considerable number of cases of contracted pelvis of the first degree (C. V. not below 8 cm.), with intact membranes and a fully dilated os, from the history of former labours it appears more or less improbable, though perhaps not impossible, that without serious difficulty the child can be born head first without suffering any injury; in such cases prophylactic version, undertaken before the waters have escaped, offers an almost certainly favourable result for both mother and child; while expectant treatment must always leave the issue doubtful, especially as regards the child.

INDUCTION OF PREMATURE LABOUR BY PUNCTURE
OF THE MEMBRANES.

DE REGNIER, Basle (*Hegar's Beitræge*, Bd. ix., Hft. 1), comes to the conclusion that in cases in which prompt delivery is not indicated, or in which, with a corresponding size of the fœtal head, the conjugate diameter amounts to from 7.25 to 9.5 cm., and the obstacle to delivery is the space available, puncturing the membranes offers the best prognosis both for mother and child.

THE IMMEDIATE AND LATER RESULTS OF THE INDUCTION
OF PREMATURE LABOUR FOR CONTRACTED PELVIS.

HUNZIKER, Basle (*Hegar's Beitræge*, Bd. ix., Hft. 1), reports that in the Basle Klinik about one-fifth more children are born alive by the induction of labour, and twice as many are alive on the tenth day, as would be by spontaneous delivery.

INDUCTION OF LABOUR, ESPECIALLY AS REGARDS THE FATE
OF THE CHILDREN.

LOREY, Halle (*Archiv f. Gyn.*, Bd. lxxi., S. 316), alluding to the disfavour in which the induction of labour has been held, quotes the authority of Kroenig, who, in his work on the "Contracted Pelvis," published in 1900, declared that this proceeding did not offer a better prognosis for the children than expectant treatment, even with the possibility that at term symphyseotomy or Cæsarean section might be declined and perforation be obligatory; moreover, that this was especially so in the degrees of contraction in which induction had principally to be considered.

In view of this condemnation, Lorey has analysed 137 cases from the Klinik at Halle, till lately under the direction of Professor Bumm, and finds that in 100 labours, in 82 women with pelves exhibiting a contraction varying from 6.5 cm. to 10.25 cm., the induction of labour resulted in the delivery of 74 children alive and 26 still-born; during the ten days after birth 13 other children died, giving a total mortality of 39 per cent. Now these 82 women had had in previous labours 207 children, of which 196 had been born spontaneously, or at all events without either the induction of labour or Cæsarean section, and the immediate mortality of these 196 children exceeded 78 per cent. In contractions of the pelvis, therefore, the results of the pre-

mature induction of labour as regards the children are twice as good as spontaneous delivery or extraction by forceps, or after version.

Nevertheless, induced labour does not begin to give satisfactory results unless the contraction of the pelvis is as low as 8 cm., and the pregnancy has reached the thirty-sixth week at the least.

As regards the further fate of the children: 40 of the 56 of whom Lorey was able to get a report lived more than a year, a proportion of 71.4 per cent., or 73.2 per cent. if one abstracts 1 case of infanticide. Indeed, deducting 5 illegitimate children, including the 1 killed by its mother, we find that of 51 children delivered prematurely and discharged alive from hospital only 11 died in their first year, a mortality of 21.5 per cent. Now the general mortality of children in their first year in Halle is 24 per cent.

The length of gestation is most important: Of the infants born before the thirty-fourth week not one lived for a year. The induction of labour before the thirty-fifth week may be deemed equivalent to perforation, and is only to be performed in the interests of the mother. The prognosis for the children whenever labour is induced on account of the mother's ill health, is very bad indeed.

THE LATER EFFECTS OF INSTRUMENTAL DILATATION OF THE CERVIX OF THE PARTURIENT UTERUS.

V. BARDELEBEN (*Archiv f. Gyn.*, Bd. lxiii., S. 187) reports that in six cases in which mechanical dilatation had been employed, examination about five months afterwards detected lacerations of the cervix in four, in one instance extensive laceration of the portio, and in one a singular injury affecting merely the pars supravaginalis. Clinical observation had convinced him that inflammatory genital affections were extremely common after extensive tears of the portio or cervix, occurring in 75 per cent. of the cases. The secondary infections and retracted cicatrices following the cervical lacerations, which are certainly not unusual, must also be considered a serious disadvantage of mechanical dilatation.

BOSSI'S DILATOR.

MUUS (*Hospitalstidende*, 1904, Nos. 17-18) gives the results of the use of Bossi's metal dilator in the Royal

Lying-in Institution under the direction of Professor Meyer. The instrument was employed to dilate the os and accelerate delivery in thirty-five cases, and half an hour was systematically expended in completing the dilatation in the cases of twenty-one primiparæ and nine multiparæ. In thirteen of these cases the portio vaginalis was not injured at all; in seventeen there were inconsiderable single or double lacerations which did not extend to the vaginal vault; in one instance the tear extended above the internal os, but there was no hæmorrhage. The patient died from eclampsia after delivery. In two instances the dilatation was effected very rapidly in the course of from three to seven minutes, in one during the agony, and in the other on account of grave eclampsia, and in both cases serious cervical lacerations were found at the autopsy. Finally, in two instances of abortion unsuccessful attempts were made to dilate an extremely rigid os internum. The technique is not difficult, nor, if care be taken, is the method severe on the patient. The indications for its use in the above cases were: (1) Eclampsia in fifteen cases with three deaths, a better result than given by vaginal Cæsarean section; (2) premature detachment of a normally placed placenta in five cases, normal childbed in all; (3) placenta prævia in three instances, normal recovery in two, fatal puerperal fever in the third; (4) rigid cervix, tardy labour and infection in one case, with normal childbed; (5) severe pyelonephritis in five cases, which did well; (6) serious heart disease in three cases, early in labour in two with good result, during the agony in the third in order to save the child; (7) abortion in three cases, once with, and twice without, success.

HAHL, Helsingfors (*Archiv f. Gyn.*, Bd. lxxi., S. 509), reports on the use of Bossi's instrument in the klinik directed by Heinricius, where it has been employed, with favourable results, in eleven instances. It must, however, be noted that very great care was exercised and the time taken in dilatation was long, even upwards of an hour. He gives as indications: eclampsia, prematurely detached but normally placed placenta, some cases of abortion in the fourth to the sixth month, cases of uterine inertia when mother or child is in danger, and those in which other methods of inducing labour have been tried in vain. To complete delivery after the dilatation, Hahl very properly recommends forceps in

preference to version, for he also has found that the cervix contracts again and that lacerations may be caused, or extended to a dangerous extent, by the forcible extraction of the aftercoming head. Placenta prævia he considers a contraindication. He differs from Leopold as to uterine contractions being set up by the dilatation; the third stage, however, is generally favourable.

FROMMER (*Zentralb. f. Gyn.*, 1904, No. 34) points out that the modification of Bossi's instrument, described by Walcher as "new," is almost identical with his own. He gives two cases of dilatation without laceration or bleeding, and will by no means admit Duehrssen's claim to the superior advantages of vaginal Cæsarean section.

SCHALLER, Stuttgart (*Ibid.*, 1904, No. 35), reports a serious rupture of the uterus, extending into the right parametrium during a careful dilatation with Walcher's instrument, with the object of palpating the cavity of the non-gravid womb of a 36-year-old woman who had had two children. Plugging with iodoform gauze: ergot internally: recovery.

V. ERDBERG, Riga (*Ibid.*, 1904, No. 35), reporting a case, without laceration or bleeding, but ending fatally from eclampsia after the extraction of a live child, draws attention to the effect of the dilator in eliciting uterine contractions, which in his opinion has not been sufficiently noticed, and also to the important fact that the cervix is merely dilated—is not taken up into the uterus, but lies like the mouth of a sack in the vagina. The genital canal is open for delivery, but not in a physiological way. This condition explains the lacerations of the cervix which often occur during delivery. It was for this reason that, in the case reported, to avoid laceration and ensure sufficient room, he allowed the dilator, expanded to its extreme extent, to remain *in situ* for two minutes, and then delivered with the forceps. He supposes that for the same reason Bossi recommends forceps rather than version.

EHRlich, Dresden (*Archiv f. Gyn.*, Bd. lxxiii., S. 439-543), assistant at Professor Leopold's Klinik, in a very eulogistic article gives a summary of the extensive literature of Bossi's method of dilating the cervix, the anamnesis of 30 additional cases in which it has been employed for other causes than the induction of labour, and, on the basis

of the series (47 cases in all), discusses the indications, technique, and results of the operation. The indication was eclampsia in 31 cases. The method is applicable at any period of pregnancy and in any condition of the cervix, the most important point in it is the management of the instrument. In 75 per cent. of the cases there was no laceration of the cervix at all, or any laceration was slight and insignificant. Two serious tears occurred, one extending through the cervix to the vagina, another deep cervical one requiring 6 stitches; no other lacerations of importance were due to the dilatation alone, but occurred in cases in which the forceps was used, or some other obstetric operation performed. Nor did Bossi's method in any instance lead to serious puerperal trouble. Ehrlich insists much upon the contraction which the cervix undergoes after the instrument is withdrawn, and upon the effect this may have on the child after version. Indeed, Leopold's experience of version and extraction after dilatation was almost prohibitive.

THE INDUCTION OF PREMATURE LABOUR BY MEANS OF BOSSI'S METHOD OF DILATING THE CERVIX, SUPPLEMENTED BY METREURYSIS.

HELLER (*Ibid.*, S. 544-559), also one of Professor Leopold's assistants, reports on 30 cases of induction of labour for contracted pelvis. The cervix was dilated in about fifteen minutes to 4 or 5 cm. diameter with Bossi's instrument or one of its modifications (Frommer, Krull), or in seven cases by de Seigneux's instrument, and a metreurynter then introduced. The bag was ejected, on the average, after 7 hours, and the labour lasted from 4 to 25.5 hours, 11.5 hours on the average. Of the 30 children 25 were born alive. In 8 cases there were lacerations of the cervix from 1 to 5 cm. in length.

In France Bossi's instrument is not approved of. MAURY, for instance, in a recent Paris Thesis (*Zentralb. f. Gyn.*, 1904, No. 43), while recommending that in all cases of eclampsia the uterus should be emptied as soon as possible, says that manual dilatation of the cervix (Bonnaire) is to be preferred to the instrumental method.

HEBOTOMY.

VAN DE VELDE, Haarlem (*Zentralb. f. Gyn.*, 1904, No. 30), to whom the revival of Stoltz's "Hebotomy," that is, the

division of the os pubis with a saw to obtain a permanent expansion of a narrow pelvis, is due, has found a supporter in Doederlein. To two cases previously reported he now adds three others, all successful as regards both mother and child. Moreover, the second was a twin birth; serious atonic hæmorrhage was controlled by plugging. A comparison of the pelvic measurements before and after the operation, which he considers in every way superior to symphyseotomy, showed an enlargement of as much as 1.5 cm.

DOEDERLEIN, Tuebingen (*Zentralb. f. Gyn.*, 1904, No. 42), reports four more cases with successful results for both mother and child, and recommends a novel proceeding, the application of a sterile rubber tube round the pelvis in every case, to prevent excessive spreading of the bones during the extraction of the head; moreover, he advises that the bone should not be sawn through until the course of the labour shows that the passage of the head is not possible without the section of the pelvis.

FERRONI, Milan (*Zentralb. f. Gyn.*, 1904, No. 35), reports a successful case of hebotomy in a young woman with contracted pelvis, aged 27, attended by severe hæmorrhage during the section of the os pubis, and the formation of a large puerperal hæmatoma in the labium majus. A living child was extracted with forceps. He has found twenty-six cases already published, of which twenty-five recovered and one died from chloroform.

BERRY HART, at the Edinburgh Obstetric Society last January, estimated the mortality of the operation at 6 per cent., but compared with symphyseotomy, considered it had the advantages that asepsis was easier, accidental injury of neighbouring parts was not so easy, and non-union of the divided parts was not so common.

REPEATED RUPTURE OF THE UTERUS.

PATZ, Hohenelbe (*Wiener m. Wchus.*, 1904, No. 35), reports a case in which a woman's life was on two occasions saved by laparotomy after rupture of the uterus during labour, considerable hæmorrhage, and escape of the foetus into the peritoneal cavity. On the first occasion the laceration was sutured; on the second, supracervical amputation of the uterus was performed.

STOVAINE IN OBSTETRICS.

DOLERIS and CHARTIER (*C. R. Soc. Obst. Gyn. Pæd.*, July, 1904) report two cases of rachidian injection of stovaine in painful and prolonged labour. A few minutes after injecting 2·5 centigrammes, the uterine contractions began to increase, they became more frequent and longer, and sometimes ran one into the other. They were, however, quite painless. The action was prolonged for about an hour, the labour and dilatations proceeded without any pain. In another case reported, labour was induced prematurely at seven months by the rachidian injection of 3 centigrammes of stovaine, the result being obtained in six and a half hours. It follows, therefore, that anæsthetisation by the action of stovaine for surgical operations in pregnant women is contra-indicated.

P. Z. H.

THE MEANING OF FEVER DURING PARTURITION.

IHM, Koenigsberg (*Zeits. f. Geb. u. Gyn.*, Bd. lii., Hft. 1), from a careful statistical study of 200 cases, concludes the most important etiological factor in fever during labour is the rupture of the membranes too soon or in an early stage. The prognosis of such fever is little or no worse for primiparæ than for multiparæ. If delivery takes place spontaneously the prognosis is far better than if operative interference is required; under the former conditions multiparous women are more likely to have a feverish childbed. The protraction of labour after the waters have come away does not appear of dangerous import for the puerperium, unless it extends beyond three days and the fever has come on very soon after the rupture of the membranes. The total length of the infection (from the observation of the fever, &c., to the end of the labour) is no sufficient basis for a definite prognosis; a very protracted infection is as likely as not to be followed by a fever-free puerperium. Nevertheless, cases in which the fever has come on only a short time (one or two hours) before delivery without any, or with only slight, assistance, offer as a rule a more favourable prognosis (*e.g.*, fever due to feeble contractions though the head is at the pelvic exit). The intensity of the infection is a better criterion. Tympany of the uterus is alarming, as also the complication of placenta prævia. Elevation of the temperature and rigors during labour do not in themselves

imperil the case. The condition of the pulse is important, and if it is persistently rapid the look-out is not favourable, especially if the temperature sinks or remains the same. Fever while the sac is unruptured seems to be less unfavourable. Therapeutically, prophylaxis is most important; the more rapid, simple and natural the delivery in feverish labour, the more reason is there to hope for a fever-free childbed.

THE PREVENTION OF CHILDBED FEVER.

ZWEIFEL, Leipzig (*Zentralb. f. Gyn.*, 1904, No. 21), says that on vaginal examination shortly after the discharge of the placenta, one or two clots of the size of a hazel nut are nearly always to be found in the vaginal culs-de-sac. As such fibrinous depôts might well be the origin of rises of temperature, he has them carefully removed by dry pads in all labour cases under his care, and since he has done so the puerperal morbidity has fallen to 5·7 per cent., or, excluding pulmonary and other complications, to 3·3 per cent.

MUELLER (*Ibid.*, No. 26) likewise attaches much importance to the retention of small blood clots and pieces of placental tissue as a cause of childbed fever. He holds they should always be removed by douching, and himself employs an instrument with which he can exercise some friction.

BOKELMAN (*Ibid.*, No. 26) says that such cleansing of the vagina, if at all necessary soon after delivery, ought to be repeated at regular intervals during convalescence, for clots continue to be formed. Such interference, when the patient is just entering on her much needed rest, would not only be annoying to her, but would separate tears just beginning to heal and offer opportunities for infection. He deems strict asepsis of all objects coming in contact with the genital tract during labour and absolute rest of the parts after delivery as the two essential factors in preventing fever during childbed.

CAN FATAL INFECTIONS BE AVOIDED IN LYING-IN INSTITUTIONS WHICH ARE USED FOR INSTRUCTION?

AHLFELD (*Zentralb. f. Gyn.*, 1904, No. 33) asserts that they can. In 8,000 labours conducted in the Marburg Klinik under his direction, there was only one death from

sepsis after normal spontaneous delivery, and in that case the woman had made a vaginal examination herself "to see if the child was coming." In the whole number there were only twenty deaths from sepsis, a percentage of 0.286, a happy result which he attributes to his method of disinfection with hot water and alcohol. The prophylactic removal of blood clots from the vagina recommended by Zweifel he condemns as strongly as Bokelmann.

ON THE RECOGNITION OF TRUE SEPTICÆMIA.

KNEISE, Halle (*Archivf. Gyn.*, Bd. lxxiii., S. 330), reports : A woman, aged 32, was delivered spontaneously, but had been examined during labour fourteen times by the midwife. She got up on the fourth day, but the same evening was feverish and after three days more was brought to the hospital. Her lochia were not increased, nor stinking, but the contents of the uterus showed a pure culture of streptococci. The blood from a vein in the lower arm also gave a pure culture of streptococci. She died on the fourteenth day of childbed without ever having a rigor. Macroscopically, the autopsy was negative ; microscopically, the uterine wall, heart, liver and kidneys, were pervaded by streptococci, yet there was no local reaction in any tissue. This sort of streptococcic infection has been variously called sepsis, septicæmia, streptococæmia, and Kneise would prefer, following Bumm's example, to apply to this form of wound infection (general infection distributed by the circulation) the name "true septicæmia."

ON THE SEROPATHY OF PUERPERAL FEVER.

BUMM (*Muenchener m. Wchs.*, 1904, No. 25), in an address to the Berlin Medical Society on June 15, 1904, said : "The influence of antiseptic treatment upon puerperal fever has been less than upon any other form of traumatic infection. It is true that in hospitals, formerly its breeding places, puerperal fever is now reduced to a minimum, but in general practice, in which far more labours occur than in hospital, the influence of antiseptics cannot be seen. As many women, from 4,000 to 5,000 yearly in Prussia alone, die now from puerperal infection as in the days before antiseptics. Even in Berlin, six weeks' experience had shown him that matters were not much better, although in general the mortality in large cities was less than in country districts. Midwives had been

accused of insufficient disinfection, but unfairly so. The difficulty lay in the impossibility of carrying out disinfection in a private house (insufficient help, prolonged attendance), and in the necessity of midwives undertaking the more menial details of nursing, whereby they were constantly contaminated afresh, &c. Women themselves are often to blame, for going about too long with bleeding or even already putrescent abortions without calling in a doctor. It cannot be expected that we shall have any improvement in the prophylaxis of puerperal fever with the present system of antiseptics. Such improvement can only be obtained by parturients being taken into institutions for childbirth, instead of being confined at home. For the present, therefore, the task of successfully contending with puerperal fever is our daily duty, and since all means of doing so hitherto at our disposal have proved insufficient, since local antiseptics is not efficient in sepsis, but only in decomposing processes, since surgical measures such as extirpation of the uterus, curetting, or according to the last French fashion, brushing out the uterus, have proved harmful, one must welcome the attempt to strike at the root of the evil by the help of seropathy.

Still it was not received exactly with enthusiasm, for in the particular instance of streptococcic infection one could not expect any great success from it, especially after the early disappointments experienced with Marmorek's serum.

One would have thought that the past ten years might have brought some unanimity as to the value of seropathy: that this has not been the case depends on the enormous variability of puerperal fever, the prognosis of which it is so hard to estimate in individual cases. In the worst kind of general sepsis the prognosis is not doubtful; nor, on the other hand, is it so in those of local infection. Between these two forms lie the vast majority of the cases, those in which the temperature once or twice exhibits an elevation accompanied by rigors, and which, like the localised processes, generally (in 70 per cent.) recover of themselves; and if in such cases seropathy were employed, that recovery would too often be attributed to the serum. One can hardly be sceptical enough in giving credit of this kind; a point to be taken to heart in regard to the serotherapy of angina (diphtheria), scarlet fever, rheumatism, &c., also.

The true appreciation of the action of serum is further obscured by the differences in the quality of

the sera supplied. He (Bumm) had tried them all (Marmorek, Tavel, Merck, Menzer, Aronsohn), and thanks to the liberality of the discoverer and the manufacturers (Scheering), he had had especially extensive opportunities of using Aronsohn's, so that the majority of his experiments were based upon this preparation.

In appreciating the results no comparison of statistics would be employed, for statistics were misleading. For instance, if all the cases of one-day fever were injected they would yield 100 per cent. of cure. It is better to divide the cases of puerperal fever into sub-classes and consider each of these independently.

(1) Peritonitis puerperalis septica : five cases all treated with large doses of serum : all fatal, and none betraying any influence upon the temperature or upon the presence or abundance of streptococci in the blood.

(2) Operative peritonitis following serious obstetric operations : mixed infections, four cases, likewise without effect.

(3) True septicæmia : three cases ; in two, in which the blood of the cadaver was overloaded with streptococci, no effect ; in the third the temperature was three times promptly reduced by injection of serum and the case recovered under the formation of a thrombophlebitis of the right leg.

(4) Septic endocarditis : three cases, without effect. In one instance the serum was injected intravenously and appeared to be detrimental.

(5) True pyæmia (thrombophlebitis purulenta) : three cases without effect. Intravenous injection seemed to be detrimental.

(6) Parametritis and perimetritis as localised processes which the natural forces can cure, were expressly excluded from the experiments.

(7) Endometritis streptococcica (the chief group) : fifty-three cases, of which a number were slight ones, but thirty-two severe, with dense investment of the wounds and of the endometrium. The blood was examined in seventeen and streptococci were found in twelve ; five were fatal (pyæmia, lymphangitis) ; the serum injection had no certain effect in seven, but in twenty-one the clinical aspect and temperature curve showed indubitably that it had.

Bumm was therefore convinced of the favourable action

of serum injections in such localised affections. He had, moreover, found additional objective evidence in the condition of the lochial secretion. In the lochia from an infected uterus the streptococci are found in long chains *between* the pus corpuscles, but under the favourable action of the serum a change, often a critical one, takes place, and the chains become shorter and are found *inside* the leucocytes. This phagocytosis signifies that under the influence of the serum the organism has been again fitted for the task which, in cases of spontaneous recovery, it is capable of and performs. In eight cases examined upon this point, phagocytosis was established within twelve hours after the injection. This investigation is to be carried further.

The serum, as presented to us to-day, is therefore inefficient in serious cases: yet as—except when injection is intravenous—it does no harm it should be given further trial. Bumm had seen two abscesses occur, in each case in connection with serum obtained, not from the Berlin factory, but from another source, and not clear and transparent.

In localised processes seropathy is to be recommended unconditionally, since in a large number of cases it was beneficial; when the uterus contained streptococci and membranous exudation, serum was especially desirable, but it was of no use except in large doses.

Bumm considered that an important step in advance lay in the fact that by Tavel's process the serum had no longer to be obtained from streptococci that had passed through the bodies of animals. He also recommended the prophylactic use of serum in cases of serious obstetrical operations. As yet the serum had no bactericidal action; he had endeavoured to procure an active serum, but the experiments made in Basel by his assistant, Burckard, he could not for the present continue in Berlin.

In the discussion OLSHAUSEN joined issue with Bumm as to puerperal fever not having decreased in private practice. No direct conclusion could be drawn on that point from statistics, for now, under the strong pressure of those in office, many more cases of puerperal fever were notified. Personally he was convinced there had been a decrease. It was a very difficult matter to appreciate the action of the serum, because of the uncertain prognosis in cases of streptococcic infection. He had seen favourable

terminations without the use of serum, not merely in cases of one-day fever, but in such as had had thirty or forty rigors, once even seventy rigors in seventy days. Such curves were typical of thrombophlebitis, which was a condition quite open to spontaneous cure. Personally he had only tried serum in most desperate cases and without any success, but he would now make further trials on Bumm's recommendations.

W. A. FREUND appreciated Bumm's division of the puerperal fevers from the anatomical point of view; still there were other forms of this variable disease, and he asked how one could recognise that a case was one of endometritis septica, and that the infection had not extended beyond the mucosa? He had made several trials of Marmorek's serum, invariably without success, but nevertheless thought that on the ground of recent improvements further trial of seropathy was absolutely advisable.

BUMM, in reply, said that he recognised endometritis by its appearance, that is to say, by the inspection of the genital organs, and that the infection had not yet extended beyond the uterus, by the negative result of examination of the blood, or by the absence of other septic symptoms.

RETENTION OF A FULLY DEVELOPED FŒTUS FOR THREE MONTHS AFTER TERM.

GOLDENSTEIN, Jassy (*Zentralb. f. Gyn.*, 1904, No. 26), reports a case in which he delivered a woman of 40, who had had eight normal labours, of a macerated fœtus 51 cm. long. The patient had severe pains, passing off in a few hours, three months previously and since then had missed the movements of the child. During the three months she had had no vaginal discharge, she had been able to do her work, not suffering in any way, and only sought his advice to be quit of uncertainty as to her condition.

PSEUDOHERMAPHRODISM.

RYDYGIER (*La Gynécologie*, 1904, August) reports: A patient of 44 was admitted into hospital with a hernia of the right labium major which had existed for six years, and during that time had merely grown larger. The patient had never menstruated, aborted, or had a child. The mammary glands were well developed. Examination disclosed a tumour the size of a fist situated in the inguinal region and right labium majus, giving a dull tympanitic sound on per-

cussion, and easily reducible into the peritoneal cavity. Two fingers could be passed through the inguinal rings. Neither collum or corpus of the uterus could be felt. Kocher's operation for the radical cure of the hernia was performed.

The hernia contained a body resembling a uterus with its adnexa. The uterus appeared to be rudimentary; on the right, there was a body which on section seemed like a testicle, and there was a hard cord on the same side. To the left of the uterus there was a large cyst with thick walls. Microscopic examination proved that the body on the right had the typical structure of a testicle, but there were no spermatozoa in the canaliculi. In the cyst on the left nothing was found except bundles of smooth muscular fibre; the hard cord was merely the vas deferens, with highly developed smooth fibres. In view of the presence of a uterus and a testicle the author considers the case one of complete masculine pseudohermaphroditism; he has only found five similar ones recorded.

WESTERMAN, Haarlem (*Zentralb. f. Gyn.*, 1904, No. 39, S. 1,174), saw a person, aged 30, brought up as a girl, who had a beard but no mammæ. The imperforate penis was 6 cm. long; the posterior commissure of the labia majora was well formed. Behind the opening of the urethra a sound could be passed through a second opening surrounded by a delicate membrane, into a long canal lying in the posterior wall of the bladder. The genitals and anus bore masculine hair.

Of internal genitals the following were present: A rudimentary uterus with, on the left, a well-formed tube and fimbria, a rudimentary ovary and round ligament; on the right in place of the ovary a body that, according to microscopic examination, might be a testicle with epididymis; no vesiculæ seminales. The vagina was present also.

NOTES.

WE note with regret the deaths of several distinguished Gynæcologists and Obstetricians :—

Dr. WILLIAM RICE PRYOR, Professor of Gynæcology in the New York Polyclinic Hospital, and one of the foremost gynæcologists in the United States, died on August 26, 1904, at the early age of 46. He was a member of the International Congress of Gynæcology and Obstetrics, of the American Gynæcological Society, the New York Obstetrical Society, &c., &c. We reviewed his Text-book of Gynæcology in our February number. He edited the American Text-book of Gynæcology in 1896, and his work on Pelvic Inflammation (1900), was well known.

Mr. JOHN LILLY LANE, Gynæcologist to the City of Dublin Hospital, and formerly Assistant Master of the Rotunda Hospital. He had also been Maternity Physician to Steevens' Hospital, and was Lecturer on Midwifery in the former Carmichael School, where he had himself been a student.

Dr. JOHN JOSEPH CRANNY, who died on July 27, 1904, Surgeon to the Jervis Street Hospital, Dublin, was Examiner in Midwifery at the Royal College of Surgeons of Ireland, and had been Assistant Master of the Rotunda Hospital. He was a man of wide culture and as popular as well-known.

Dr. W. MASSAN, Extraordinary Professor of Obstetrics and Gynæcology at Moscow.

Sir W. JAPP SINCLAIR is to be complimented not only on his knighthood, but on his action as a Member of the Midwives Board.

Dr. WILLIAM J. SMYLY, formerly Master of the Rotunda Hospital, and ex-President of the British Gynæcological Society, succeeds Sir Arthur Macan as President of the Royal College of Physicians of Ireland.

Dr. HARRY OLIPHANT NICHOLSON, F.R.C.P.Edin., has been appointed Assistant Physician to the Royal Maternity and Simpson Memorial Hospital, Edinburgh.

Dr. EWEN J. MACLEAN, M.R.C.P.Lond., F.R.C.S.Edin., has been appointed Lecturer on Midwifery (under the

Midwives Act) to the University College of South Wales and Monmouthshire, Cardiff.

Dr. HAROLD F. JEWETT has been appointed Visiting Gynæcologist, and Dr. W. L. CHAPMAN Obstetrician to the Bushwick Hospital.

Dr. FABRE has been appointed Professor of Clinical Obstetrics at Lyons in place of the late Dr. Fochier.

Dr. FRANZ, Oberarzt at the Charité Frauenklinik at Berlin (Professor Bunn) has been made Professor of Obstetrics and Gynæcology at the University of Jena, in place of Professor Bernard Kroenig, removed to Freiburg i. Br. PRIVAT-DOZENT Dr. STOECKEL, of Erlangen, succeeds Professor Franz as Oberarzt at the Charité.

PRIVAT-DOZENTEN.—The “*venia legendi*” in Obstetrics and Gynæcology has been accorded to:—Dr. EMILIO ALFIERI, at Pavia; Dr. O. PANKOW, at Jena; Dr. OTTOMAR HOEHNE, at Kiel; Dr. CARL BARSCH, at Tuebingen; Dr. HEINRICH PEHAM, at Vienna; Dr. MAXIMILIAN HENKEL, at Berlin; and to Dr. BUKOJEMSKY, at Odessa.

At the Fifteenth International Congress of Medicine to be held at Lisbon in 1896, the Agenda of the Section for Obstetrics and Gynæcology, as at present arranged are:—

(1) Obstetrical nomenclature. (2) Auto-intoxications in pregnancy. Report by Professor Pinard (Paris). (3) Indications and technique of the Cæsarean operation. Report by Professor Alfredo da Costa (Lisbon). (4) Treatment of uterine retrodeviations. Reports by Dr. Richelot (Paris), and Professor Sousa Refoios (Coimbra). (5) Treatment of uterine myomata. Report by Professor A. E. Martin (Greifswald). (6) Diagnosis and treatment of ovaritis.

The following subjects are suggested for communications to this Section:—

(1) Conservative surgery of the ovaries. (2) Tuberculosis of the adnexa. (3) Forms of metritis. (4) Uterovaginal prolapse. (5) Early diagnosis of pregnancy. (6) Insertion of the placenta in the inferior segment of the uterus. (7) Symphyseotomy. (8) Relations between appendicitis and pregnancy. (9) Treatment of lacerated perineum. (10) Pyelonephritis and pregnancy. (11) Treatment of uterine cancer. (12) Pregnancy and cancer of the uterus. (13) Treatment of puerperal infections.

SUMMARY OF GYNÆCOLOGY, INCLUDING OBSTETRICS.
FEBRUARY, 1905.

ON THE TYPICAL LOCALISATION OF FEELINGS OF PAIN AND
TENDERNESS ORIGINATING FROM THE DIFFERENT
PARTS OF THE FEMALE GENITALIA.

SCHAEFFER, Heidelberg (*Muenchener m. Wchns.*, 1904, No. 44), with most careful precautions against subjective and hysterical statements, has examined more than 3,000 patients, most of them repeatedly, and finds that the localisation of pain and tenderness due to affections of the genitalia in women is essentially typical; corresponding to some extent with the areas of Head, but for the most part capable of more extended differentiation as regards the fields of display, and in its grouping much more legitimate and in accordance with ascertained facts. There is, for example, no ovarian area of Head, but there are two different areas of sensibility in relation to the ovary according as the region affected is rather the one corresponding to the suspensory ovarian ligament (*regio supra iliaca bis lumbalis posterior*) or that to the mesosalpinx (*regio infra-umbilicalis supra-iliaca*). From the cornua of the uterus reflex phenomena appear in the iliac regions of the same side with radiations into the superior hypogastric on one side and the hypochondriac on the other. The middle hypogastric infra-inguinal corresponds to the internal os uteri; the lower uterine segment, like the lower half of the cervix, is almost anæsthetic, but the middle of the mons veneris inguinal region corresponds to the upper half of the cervix; to the firm subserous attachments, the infra-umbilical region round to the superior sacral, or sacrococcygeal with radiations into the upper parametria; to the inferior parametria, the inferior hypogastric region radiating to the sacral; to Douglas' folds, the superior sacral region; to the vaginal vaults, the anococcygeal region and the hypogastric region radiating to the sacral; to the portio vaginalis, the mons

veneris lower median hypogastric region ; and to the lower third of the vagina, the mons veneris itself.

The localisation and radiation depend, not on any certain recognised nerve routes, but upon the course of the vessels, and are easily to be explained by the history of development.

GERSONY'S PARAFFIN INJECTIONS IN GYNÆCOLOGY.

STOLZ, Graz (*Monats. f. Geb. u. Gyn.*, Bd. xx., Hft. 5), discussing the use of paraffin injections in gynæcology, points out that they have been employed more particularly in incontinence of urine and in prolapse of the uterus and vagina. When the urethra is completely lost submucous injection of the projecting swelling of the mucosa and reposition of the injected mass may be considered, or when the urethra is still preserved, injection of a single large depôt of vaseline in the neighbourhood of the neck of the bladder. Plastic operation is, however, to be preferred for the relief of incontinence, on account of the danger of embolism which attends injections, and the latter should only be employed in cases otherwise intractable. Even in prolapse, the results are so uncertain and the danger of embolism from the injection of large amounts of vaseline so real, that such injections are not indicated, except when pessaries fail and no operation can be undertaken. Stolz concludes, from cases of his own, that the proceeding is more difficult, and the prognosis less favourable, when the urethra is wanting, but that, when the urethra is still present, this method seems to be effective and, moreover, that vaseline is to be preferred to hard paraffin.

INTACT HYMEN IN A PARTURIENT.

KLINGMUELLER, Strehlen (*Zeits. f. Med. Beamte*, 1904, No. 9), reports that in a parturient woman, aged 22, who before conception had always had great dysmenorrhœa and to whom coitus was very painful, the hymen consisted of a perfectly uninjured, very thick, and strong membrane, with a central opening at the most not larger than a knitting needle. The forefinger passed easily into the bladder through the enlarged urethra, the orifice of which was surrounded with a thick roll of mucous membrane ; no doubt congress had been by this way.

RICHTER, Dessau (*ibid.*, No. 11), reports a case in which at labour the hymen formed a white tendinous membrane stretched over the foetal head ; it had to be split from its central opening, which was not larger than a pea.

IMPERFORATE HYMEN.

RICHTER also reports a case of hæmatocolpos in a maiden, aged 16, who for a year had suffered from severe sacral and abdominal pain; the tumour reached up to the umbilicus and the hymen protruded convexly. About two litres of dark clotted blood was set free by a trocar, and the opening in the hymen was afterwards enlarged.

PARALYSIS OF THE NON-PREGNANT UTERUS.

KOSSMANN, Berlin (*Zentralb. f. Gyn.*, 1904, No. 44), again records a case in which he introduced 14 cm. of a curette into the uterus without encountering any opposition. A sound passed directly afterwards only penetrated for 7 cm., nor could the curette be then passed any deeper. An anterior colpotomy performed immediately afterwards proved that there was no injury to the uterine wall. He is convinced that in this as in his previous case (*ante*, vol. xiv., p. 130) there must have been a temporary paralysis of the uterine musculosa.

ON ACCUMULATIONS OF BLOOD IN DUPLICATE GENITALIA,
WITH UNILATERAL ATRESIA.

KATZ, Berlin (*Archiv f. Gyn.*, Bd. lxxiv., S. 349), reports: in the case of a girl aged 26 in Abel's Frauenklinik, who had always had severe abdominal pain at her periods, the diagnosis made was, hæmatometra in the right atretic horn of a duplex uterus and ovarian hæmatoma. After anterior colpotomy, the right rudimentary horn, with the corresponding ovary and tube (hæmatosalpinx) were removed, the uterus and healthy left adnexa were not, and the girl got perfectly well. Katz gives a very complete list of the literature of these accumulations.

OPERATION FOR DYSMENORRHŒA IN UNMARRIED WOMEN.

SELLMAN (*Amer. Journ. Obst.*, Nov. 1904) believes that in many cases of dysmenorrhœa relief can be given by minor surgical procedures, but that few cases of stenosis can be relieved by ordinary dilatation, and he has introduced, for cases in which its effect is only temporary, a form of dilator called the reamer. These instruments are made of three sizes, and are cone or olive shape, with moderately sharp knives on their lateral surfaces and a blunt end to avoid perforation.

The small sized reamer is slowly introduced until it is felt in contact with the point of contraction, the instrument should then be given several twists towards the right, exerting a slight pressure upwards; this is essential in order to engage the dense tissue against the sharp edges of the knife. This movement is persisted in until the instrument slips into the cavity of the uterus. It may be necessary to use the second or even the larger size. The canal is then packed with iodoform gauze, which is again renewed in three days, and a wire stem pessary is worn for a short time afterwards. In inflammatory conditions of the uterine mucosa or parenchyma, he believes curetting to be the best method of relieving congestion. For dysmenorrhœa due to sensitive, congested or cystic ovaries, he advocates operation and resection of the ovary.

Discussion.—LONGYEAR did not agree with so much operative intervention in the dysmenorrhœa of young unmarried women. He protested against operating upon cases that were of short duration. HAYD referred to those most perplexing cases in which examination disclosed no definite pathology. If there were retroversion, a tender ovary or an inflamed tube, then there would be a rational basis on which to work. A contracted os did not necessarily cause dysmenorrhœa; many cases were due to an impoverished condition of the whole system. He did not care for the reamers. HUMISTON did not think dysmenorrhœa occurred unaccompanied by inflammation of the uterine mucosa, he therefore dilated and curetted. The author's reaming-out process would not restore or keep in place a retroflexed uterus. YOUNG BROWN said that unless there was a distinct pathological condition present it was better to leave these cases alone. DUNNING thought that in the majority of cases there were errors in development, either of the uterus or of the nervous system. For dysmenorrhœa due to ante flexion he believed in the operation of Dudley, which must, however, be done upon a well-developed and not upon an under-sized uterus.

J. F. J.

A RESUMÉ OF THE SURGERY OF RETRODEVIAION OF THE UTERUS.

DORSETT (*Amer. Jour. Obst.*, November, 1904), in his Presidential Address to the American Association of Obstet-

ricians and Gynæcologists, has surveyed the whole of the operative field, describing amongst others the Alexander-Adams operation, those of Mackenrodt, Gottschalk, and Duehrssen, and finally Olshausen's, Kelly's, and his own. Kelly's he considers as dangerous on account of the risk of entanglement of the bowels in resulting adhesion bands. In the majority of cases retrodeviations of the uterus are complicated by inflammatory diseases of the appendages, and the field for operative work outside the peritoneal cavity is necessarily small. He does not contemplate the possibility of a thorough inspection of the appendages from above. He would discard the entire class of operations that contemplate the vaginal incision, either anteriorly or posteriorly, on account of the greater liability to sepsis, as well as from the impossibility of anchorage to firm structures.

J. F. J.

THE TECHNIQUE OF AMPUTATION OF THE INVERTED UTERUS.

FALK, Berlin (*Muencheuer m. W'chus.*, 1904, No. 44), admits that Kuestner's method makes the conservative treatment of inversion of the uterus possible in most cases, but holds that amputation of the inverted womb is justifiable, not only when the displacement is due to tumours, but also when infection is present. The more usual methods of amputation after the application of an elastic tube, or by ligatures *en masse*, passed through the funnel of the inversion may result in injury to the intestines, or endanger the life of the patient from hæmorrhage when the tightly stretched broad ligaments retract. In removing the inverted uterus, therefore, Falk urges abstention from putting a ligature round the uterus and from ligatures *en masse*, in order that we may ascertain, by a transverse incision about the level of the inner os, that the funnel of the inversion is empty. Ligature of the spermatic vessels and of the broad ligaments should precede the removal of the uterus after it has been dislocated forwards through a transverse incision in its anterior wall. The author has used this method in a case of total inversion of a prolapsed and infected uterus in a machine sempstress aged 26, from whom during pregnancy he had removed an ovarian cyst larger than two clenched fists, the pressure of which on the uterus threatened abortion. The further course of pregnancy and childbirth

under the care of another physician had been normal, but on account of hæmorrhage the placenta was expressed by Credé's method, and prolapse of the inverted uterus took place. Four weeks later he saw the woman in a most miserable condition, bloodless and feverish, but after operation as described she made a good recovery. When amputation of the uterus is necessary Falk thinks it should always be done in the above way, as the transverse incision can be made as large as desirable, and if necessary extended by a longitudinal incision in the anterior wall.

ANTERIOR VAGINAL CÆLIOTOMY.

GRUBE (*Muenchener m. Wchns.* 1905, S. 141) gave a demonstration at the Hamburg Medical Society on January 10, 1905, of the technique and advantages of anterior vaginal cœliotomy, illustrated by 11 diascopic pictures taken during the operation. He reported 70 cases, of which he had only lost one (less than 1·5 per cent.); in one only he had been compelled to do an abdominal operation, and once the bladder had received an injury, which, however, was at once sutured, and healed promptly. He stands fast to the principle of operating by the vagina whenever possible, as such operations give the surgeon ampler indications, and apart from other advantages are much safer to life. Whether the vaginal way will suffice, or an abdominal operation will be required, can nearly always be determined by bimanual palpation, with perhaps the use of the sound, in deep narcosis.

FIBRINORRHEA PLASTICA, MYOMA CAVERNOSUM AND ENDOMETRITIS CHRONICA CYSICA.

WALLART, St. Louis (*Zeits. f. Geb. u. Gyn.*, Bd. liii. Heft 2), describes a unique case: a woman of 59 years of age, from whose uterus, several times a day, white or yellow caudate egg-shaped bodies, as large as a half-sovereign, were discharged. Minute examination showed that these bodies, which resembled the eggs of a dog-fish, were formed of fibrin. As the uterus was much enlarged, and the suspicion of malignant disease could not be excluded, the organ was extirpated, and was found on histological examination to exhibit the pathological changes named in the title.

A RARE FORM OF CERVICAL MYOMA.

ZACHARIAS, Leipzig (*Zeits. f. Geb. u. Gyn.*, Bd. liii., S. 182), describes a peculiar fibromyomatous transformation

of the entire cervix and portio, the cervical canal being symmetrically surrounded by the new growth, which was not delimited towards the body of the uterus by anything like a capsule, and had caused a notable enlargement of the cervix and portio. The diagnosis made had been one of carcinoma, as a putrid, stinking discharge, and hæmorrhage persisting for six weeks, had driven the patient to seek medical advice.

CONSERVATIVE TREATMENT OF UTERINE MYOMATA.

HENKEL, Berlin (*Zeits. f. Geb. u. Gyn.*, Bd. liii., Heft 3), reports that Olshausen's Klinik is remarkable for the small number of operations that are there undertaken for myoma, only 16 per cent. of the women who apply for advice on account of such growths being submitted to operation. This rigid selection necessarily implies a systematic development of conservative treatment, the details of which Henkel describes in this article, from which one learns, in addition to very many practical hints, that under suitable treatment, severe menorrhagia and metrorrhagia, even of long standing, may by suitable treatment be cured without operation.

THE TREATMENT OF MYOMA.

MARTIN, Greifswald (*Monats. f. Geb. u. Gyn.*, Bd. xx., S. 1130), in discussing the treatment of myoma, addresses himself chiefly to the question posed by Winter (*ante*, p. 17), as to whether there is a scientific basis for the conservative method of operating on these growths. Martin's own brilliant results encourage him to adhere to the vaginal and whenever possible to conservative methods of operating. The continuance of menstruation is one very definite advantage of conservative practice, while after radical operation it is seldom that omission symptoms do not occur. Though recurrences of tumours after enucleation do take place and give local trouble they do not constitute complete failures. In enucleation it is essential to preserve plenty of muscular tissue. The conservative methods offer real advantages as regards the patient's future condition. It is, however, impossible to leave it to the patients to say whether the operation shall be conservative or radical; the question can only be decided at the time of operation. At the beginning of the operation Martin makes an inquisitional curetting and frequently makes an extensive resection

of the superfluous mucosa in order to diminish the discharging surface. He does not admit that the vaginal route implies imperfect control of the bed of the tumour, and that one must therefore operate in a radical fashion; to him the limits of the vaginal operation depend entirely on the size of the tumour. When there is any difficulty in moving the tumour in the pelvis, Schuchardt's incision may be a great assistance. Martin prefers the abdominal route only in suppurating affections of the adnexa, and then even for small myomata. He considers that the amplification of the vaginal operation in Mackenrodt's way is by no means free from danger, on account of the neurotrophic changes in the ovaries which are to be feared. Martin was in the habit of resecting the capsule of the myoma before this proceeding was proposed by Henkel. He closes the bed of the tumour by a continuous catgut suture.

THE INDICATIONS FOR OPERATION FOR FIBROIDS OF THE UTERUS.

NOBLE (*American Medicine*, September, 1904) is convinced that the teaching concerning the complications and degenerations of fibroids is faulty. He refers to his paper read in 1901 before the British Gynecological Society, and to series of cases reported by Cullingworth, Frederick, Scharlieb, and Hunner and McDonald. There are thus available 983 cases of fibroid tumours from which an analysis can be made as to the nature of the degeneration and complications of these growths. The analysis is very long and only the chief points in it can be here referred to. In 78 cases there was cystic degeneration of ovaries, in 69 hyaline degeneration and in 67 necrosis of the tumour, in 47 ovarian cysts, in 46 salpingitis, in 58 hydrosalpinx, in 33 pyosalpinx, in 44 myxomatous degeneration, in 40 cystic degeneration, in 34 intraligamentous development of fibroids, in 29 cancer of the body of the uterus, in 22 sarcoma, in 12 cancer of the cervix of the uterus. Cancer of the body is here relatively more frequent than of the neck. This is the opposite of what occurs in women without fibroid tumours, in whom cancer of the neck is four times as frequent as that of the body. The fibroid tumour must exert such an influence upon the nutrition of the uterus as to predispose to the development of cancer of the body.

A consideration of this analysis should dispel the idea that fibroid tumours are benign growths, and that their

chief danger consists in the fact that they sometimes cause hæmorrhage. The analysis shows that 16 per cent. would have died because of the degenerations in the tumours, that 18 per cent. would have died from the complications present, and a certain percentage would undoubtedly have died from intercurrent diseases brought about by the chronic anæmia and by injurious pressure from the tumours upon the pelvic and abdominal organs. The statement that fibroid tumours disappear after the menopause is quite erroneous. Many grow more rapidly after than before the climacteric, and they are at least as liable to degenerations and complications. Women with fibroids are sick women, suffering either from the fibroids or from various complications. The risk they run of losing their lives by not having the fibroids operated upon is greater than that of submitting themselves to operation, at least a third of these 983 women would have died had they not been operated upon. A fibroid tumour should be removed just as an ovarian one, irrespective of the symptoms produced, because we know the life history of these growths, and that if left alone they will, in at least a third of the cases, produce a fatal result.

J. F. J.

REMOVAL OF FIBROIDS OF THE UTERUS ON DIAGNOSIS.

EASTMAN (*Amer. Jour. Obstet.*, November, 1904) thinks that medical treatment and those operations which are planned to avoid hysterectomy only serve to palliate, while the day for successful surgical treatment passes by, and he has abandoned electrical treatment as well as the ligation of the uterine arteries. He condemns procrastination, or waiting for the menopause, for a consideration of the secondary changes in the tumour compels him to early operation. Seeing that at least 5 per cent. undergo sarcomatous degeneration, seeing that other parts of the uterus may be infected with cancer, and that necrotic and infectious changes may arise in the tumours and gangrene occur, and moreover, that if the tumour is allowed to grow to a large size, there is the additional danger of cardiac disease supervening, he does not hesitate to advise operation on diagnosis. Complications which would have eventually resulted in death were encountered in 43 of 117 cases he has operated upon himself.

In the discussion, CARSTENS said that a fibroid of the uterus should be removed just as a diseased appendix. It

would have to be removed sooner or later, and the sooner the patient ceased being an invalid the better.

LONGYEAR did not admit that every fibroid should be removed when diagnosed, unless there were certain reasons, such as pain or hæmorrhage, for operating. He had a number of women under observation with fibroids, but without any serious symptoms.

GILLIAM admitted that his mind had become less conservative in the last few years, but he had not changed to anything like the extent that Dr. Eastman had. The mortality in uncomplicated cases was 2 or 3 per cent., but taking the cases as they came, the mortality would be 5 to 10 per cent.

ZINKE would not insist upon immediate operation. The certain risk in all these cases must be considered. He had patients under observation with fibroid tumours which caused them no inconvenience whatever.

J. F. J.

OPERATION FOR FIBROID TUMOURS OF THE UTERUS.

RUFUS HALL (*Amer. Jour. Obstet.*, November, 1904) discusses the question of advising early operation. The present low mortality (not more than 2 or 3 per cent.) should encourage the physician to advise early operation before complications arise in the pelvis or abdomen, which, when the operation becomes imperative, causes a high mortality. In a patient between 35 and 40, when the tumour is small, and there are no serious symptoms, and if she is free from pain, except at her periods, it is wiser not to operate, but to keep her under observation. If there be pain at times other than the periods, the cause should be sought for. If the period is prolonged to ten or twelve days and the hæmorrhage be severe, and cannot be controlled by the usual medication and rest, an operation should be considered. If the tumour is larger than a cocoanut, and the hæmorrhage severe, the period lasting eight to ten days, an operation will be necessary sooner or later. One of the dangers of delay is hæmatoma of the ovary, which usually forms in an ovary bound down by adhesions. Hall regards hæmatoma as a very grave complication of fibroid tumours. The fluid contents are very virulent, and after the operation lead to septic peritonitis. And hæmatoma of the ovary is more dangerous than a suppurating tube, since the tube is above the tumour and can be reached and removed with-

out rupture. One patient in seven with pus tubes developed post-operative peritonitis; five in every six in which there was hæmatoma developed peritonitis. Another reason for advising early operation is that secondary changes may occur in the tumour itself. These changes are usually of a serious nature, and especially so when coming on after a menopause, for then they are nearly always malignant.

J. F. J.

TWO HUNDRED SUPRAVAGINAL HYSTERECTOMIES FOR FIBROMATA.

LAUWERS, Bruxelles (*Zentralb. f. Gyn.*, 1904, No. 48), reports 194 recoveries and 6 deaths in 200 cases of supravaginal hysterectomy for fibromata, a mortality of 3 per cent. There was cystic degeneration of the tumours in 5 cases; calcification in 4; cavernous change in 1; necrosis in 5, infection in one instance. One case was complicated by carcinoma of the uterine body, and sarcomatous degeneration was present in 3. The myomata were intra-ligamentary in 11 cases; adherent in 12. Other complications met with were: pregnancy in 4 cases; ascites in 2; peritonitis in 2; ovarian carcinoma in 1; ovarian cysts in 3; and dermoids in 2; hæmatoma in 17; hydrosalpinx in 12 and pyosalpinx in 1. There was extreme anæmia in 41 patients, with phthisis in 2; and albuminuria in 3 cases.

ADENOMYOMA UTERI.

MEYER, Leipzig (*Zeits. f. Geb. u. Gyn.*, Bd. liii., S. 167), in a case diagnosed as fixed retrodeviation of the uterus with inflammatory adnexal tumours, on opening the abdomen found that the condition was as follows: somewhat below the level of the insertion of the tubes, on the posterior surface of the uterus, there were two nodules the size of cherry stones, symmetrically placed right and left. As the infiltrating growth characteristic of adenomyoma and rendering enucleation impossible was present, total extirpation was performed. From subsequent histological examination it seemed probable that the origin of the tumours lay in foetal dislodgments of epithelial germs of Mueller's ducts.

MULTIPLE PRIMARY TUMOURS.

GRAWITZ, Greifswald (*Deutsche m. Wchns.*, 1904, No. 49), reports that the autopsy upon a woman, aged 67 years,

revealed three forms of new growth, entirely independent of each other: multiple small uterine myomata; a large sarcoma (with metastases) extending far into the broad ligament, and possibly originating in a rudimentary accessory ovary; and a carcinoma of the small intestine, also with metastases.

CARCINOMA OF THE CLITORIS.

SCHMIDLECHNER, Ofen Pest (*Archiv. f. Gyn.*, Bd. lxxiv.), reports one case of the above in a woman, aged 67, recurring one year after operation, and another in a patient aged 59, operated on recently.

ABDOMINAL AND VAGINAL EXTIRPATION OF THE CARCINOMATOUS UTERUS.

DOEDERLEIN, Tuebingen (*Hegar's Beitrage*, Bd. ix., Heft. 2), endeavours to show from the results of vaginal and abdominal operations in his Klinik that, as he recently stated, the radical abdominal extirpation of the uterus and lymphatic glands is impossible, or, at all events, not yet imperative. Of all the cases of uterine cancer seen at the Klinik 48·3 per cent. were operated on by the vagina, with a mortality of 16·4 per cent. and permanent cure in 40·6 per cent. of those operated upon, of 15·8 per cent. of all cases seen, percentages of operations and of cures bearing comparison with other statistics. He very justly desires that, in future, cancer of the body should be kept distinct from cancer of the cervix, on account of the far better prognosis. Ten cases of cancer of the body of the uterus were all alive and well five years after the operation, and for this form of the disease vaginal hysterectomy offers the best prospect, as extirpation of the lymphatics is superfluous. An abdominal operation should be done in the same way as for myoma, that is to say, one should keep close to the cervix.

Doederlein removed enlarged glands from the pelvis in 65 instances, and these glands were cancerous in 22·8 per cent. of the cases, but in only 9 per cent. of cancers of the corpus uteri, and in those the disease had broken through the uterine wall. The value of extirpation of the glands in cervical cancer is illustrated by two very instructive cases. Doederlein makes out the glands by palpation through the peritoneum before cutting down upon them; he strongly

recommends Wertheim's angular clamp forceps for isolating the carcinoma.

THE ULTIMATE CAUSE OF DEATH IN UTERINE CANCER.

CEALAC (*Revista de Chirurgie*, 1904, No. 7) describes the final stages before death, and the autopsies of two patients who succumbed to uterine epithelioma. The ultimate cause of death was renal disease with consequent uræmia, originating in compression of the ureters. In one case the ureters above the spot where they were constricted by the cancerous growth were dilated to the size of an intestinal convolution; the pelvis of the kidney was as large as a closed fist; the renal tissue proper was much diminished and beset with numerous cysts. The patient had been making less and less water, and finally only 100 gms. daily; her urine contained albumen, and well-defined symptoms of uræmia set in, under which the woman ultimately died. The other case had a similar course, and at the autopsy disclosed a greatly dilated ureter and one large white and one small white kidney.

PRIMARY SARCOMA OF THE PELVIC CONNECTIVE TISSUE.

PULVERMACHER (*Zentralb. f. Gyn.*, 1905, No. 2) reports a woman, aged 36 years, who died from recurrence, five months after the removal by laparotomy of a primary sarcoma of the pelvic connective tissue. The tumour, a large spindle-celled sarcoma, had originated and developed in the right broad ligament and had given rise to small nodular metastases in several organs.

LARGE FIBROSARCOMA SUCCESSFULLY TREATED BY RÖNTGEN RADIATION.

SKINNER, New Haven, Conn. (*Archives Electrology and Radiology*, 1904, October), reports the following very remarkable case: A woman, aged 34, came under the care of Dr. W. B. Coley on April 19, 1901. She had a well-marked family history of malignant disease, and three years previously her uterus and appendages had been removed for what was taken to be a uterine fibroid (macroscopically). In February, 1901, she noticed, near the lower part of the cicatrix in the abdominal wall, a hard tumour which rapidly increased in size. The tumour on examination was found to be as large as a cocoon, firmly fixed, entirely

filling the right iliac fossa, and extending nearly up to the umbilicus and two inches to the left of the median line. An incision made under cocaine showed that it infiltrated the abdominal muscles, and microscopical examination proved it to be a fibrosarcoma. The erysipelas toxines were used for ten months, during the first two of which the growth decreased to less than half the size, after which there was no change for some time. Later on the influence of the toxines seemed to have vanished, the tumour begun to enlarge, and in January, 1902, was growing rapidly; the abdomen was then as large as if seven months gravid. When, at this time, the case came under Dr. Skinner's treatment, the diameters of the tumour were: transverse, at the level of the iliac spines, 10 inches; vertical median, 8 inches; antero-posterior, about 5 inches. Anteriorly the tumour was evenly convex, rather more prominent on the right side, of a stony hardness and firmly adherent to the overlying skin and to the os pubis. The patient weighed 128 lbs. was rapidly losing flesh, markedly cachectic, and could hardly mount half a dozen stairs. She complained of abdominal pressure, and disturbance of the functions of bowel and bladder. Her condition was rapidly growing worse. Pain had never been present.

Treatment with the X-rays of high penetration was begun on January 28, 1902, by means of a Truax improved tube excited by a static machine. The anode was placed 9 inches from the skin, the applications were for fifteen minutes and made to different areas on successive sittings, one layer of thin towelling being interposed, and the rest of the surface protected by tinfoil. A fortnight later, after six applications, an area of about 5 inches in diameter had been noticeably softened to a depth of about an inch, and the skin had become freely moveable over this area; the patient's general condition had markedly improved, and the functions of the bladder and bowel were decidedly more efficient. The distressing sensations of pressure in the abdomen had nearly disappeared, and the patient had gained 3 lbs. in weight.

The applications were continued at the rate of one every 2·7 days (forty-six in all) up to June 5, 1902, when it was found that the dimensions of the tumour had increased on the right side, but decreased on the left; the growth was irregular in outline, its longest axis running from about the level of the gall bladder to the left pubis. She had had

three or four attacks of pyrexia during the treatment; they lasted from three to seven days, and were probably toxæmic in character. The last, in May, had been the longest and most severe. Her general condition was very good, she ate and slept well, and could walk moderate distances without difficulty. Otherwise the treatment would probably have been discontinued. On June 7 she went home for ten days, and when she returned she was greatly improved; the tumour was some 20 per cent. smaller, so that she had had to take in her dress and shorten the fronts of her skirts.

From that time to September 3, 1902, she received thirty-one radiations, and the tumour slowly but steadily lessened in size. She resumed her occupation as a teacher, tentatively, returning for treatment every week or two till April 25, 1903, receiving forty-six radiations, or about one every five days. On several occasions when she could only remain one day, she received two radiations in twenty-four hours. She suffered from some erythema and her skin had assumed a brawny, leathery consistence. She had toxæmic attacks, not severe enough to interfere with her daily duties, and the decrease in the size of the tumour continued, being particularly noticeable after each such attack. Following the treatment on April 25, she had a sharp attack of toxæmia with slight soreness in the growth for six days; this was followed by a very marked lessening in size. Up to August 29, 1903, she had only eight further radiations, and on that date she weighed 139 lbs., and the tumour was no longer noticeable when she was clothed.

In September she suffered from an ulcer above the upper border of the right pubis, the size of a florin and a quarter of an inch deep, with pain, severe for a fortnight, and gradually subsiding for six weeks afterwards. Her next radiation was on November 25, 1903, before the ulcer had healed. The tumour had diminished rapidly though the radiations had been omitted, and now resembled a disc-like mass, 3 inches in diameter and 1 in thickness, to the right of the median line just above but now detached from the pubis. It was insensitive to manipulation. From this time till May 20, 1904, she received five radiations only; on this date she weighed 147 lbs. and *the tumour had entirely disappeared*. She was examined by Dr. Coley and others who had had the case under their observation long before it came under Dr. Skinner's care. A spindle-celled sarcoma, large, inoperable, and which, after resisting every measure applied for

its relief, had been developing with lethal symptoms, had been entirely removed, and the patient restored to a condition of unimpaired usefulness and apparently perfect health by 136 applications of the X-rays extending over a period of 849 days.

Skinner concludes: (1) Röntgen radiation may dissipate large, deeply-seated malignant neoplasms hopelessly lethal under other management; (2) its failures depend on factors, at present undetermined, which it seems justifiable to hope may in the future be identified and eliminated; (3) a direct connection between systemic toxæmia and the disappearance of malignant growths under Röntgen radiation is probable; (4) the radiation should be persisted in as long as the patient's condition will permit, even if no benefit is observable; (5) it has not been proved that the therapeutical effect of rays derived from a coil is identical with that of such as are derived from a static machine; there may be differences to account for success and failure.

Even should recurrence take place, this woman, three years ago doomed to an early death, has for two years been restored to unimpaired usefulness in an arduous walk in life, and to good health as perfect and a body weight greater than she ever had before, and this has been done by the instrumentality of the Röntgen ray.

CHANGES IN THE OVARIES ASSOCIATED WITH HYDATID MOLES AND NORMAL GESTATION.

WALLART, St. Ludwig i. E. (*Zeits. f. Geb. u. Gyn.*, Bd. liii., S. 36), after a review of previous researches into the above question, gives the results of his personal investigations in a case of malignant uterine tumour supervening upon an hydatid mole. In both ovaries he found the theca interna of most of the follicles changed into an epithelioid tissue, that proved to be lutein-tissue, and many of the follicles themselves dilated into cysts of various size. In normal gestation also, one meets with extensive production of lutein tissue frequently very irregularly arranged, and the formation of cysts of different sizes. Changes in the ovary of this kind are evidently physiological, for they can be shown to occur in animals. The case which is the basis of the paper was one of a tumour which appeared after the birth of an hydatid mole, and which eight months later led to metastases in the lungs and vagina. The histological structure of the tumour resembled a large-celled ensanguined

sarcoma. The author classes the case as one of atypical malignant chorion epithelioma.

CHORION EPITHELIOMA AFTER HYDATID MOLE
AND ITS DIAGNOSIS.

KRUKENBERG, Brunswick (*ibidem*, S. 76), gives a good exposition of the great difficulties in diagnosis presented by atypical cases. When the clinical symptoms are suspicious, it is advisable to allow oneself to be guided by them to obtain by a radical operation the rescue of the patient, which may still be possible, instead of waiting for the unsafe and uncertain results of histological examination.

DECIDUOMA MALIGNUM.

WORRALL, Sydney (*Austral. Med. Gaz.*, Oct. 20, 1904), reports as the first case of the kind recorded in Australia : Mrs. G., aged 35, the mother of three children, the youngest five years old, miscarried at the sixth week two years ago, but made a perfect recovery. She conceived about April, 1903, and a month later a slight flow set in and continued until December 12, when, after a smart hæmorrhage, a vesicular mole weighing 1·75 lb. was brought away with the curette by Dr. Forster, of Narradine. The hæmorrhage recurred intermittently, and the curette was again resorted to with temporary benefit, but bleeding returned, and, as the uterus was increasing in size, Dr. Forster suspected malignancy, and on consultation Worrall recommended curettage and examination of the scrapings, and a large quantity of apparently decidual tissue was removed with much hæmorrhage, the uterine wall being left quite smooth and firm. She made a good recovery, and expressed herself as feeling very well. She was asked to report herself in two weeks, or sooner if the hæmorrhage returned, but she did not do so for nearly two months after the curettage, when it appeared that she had remained well and gained flesh for a month, but that the bleeding had then returned and continued ; she had lost more than all the flesh gained ; the uterus had again increased in size, was soft and elastic and still fairly mobile. Consent to radical treatment was obtained with some trouble, and the uterus, with the appendages, and much of the broad ligaments, was removed by the vagina. There were no metastatic growths in the vagina, and to the naked eye the disease seemed to be confined to the endometrium, which was the seat of a soft, vascular, friable growth, the

size of an orange, so loosely connected with the endometrium that it could be cleanly removed by the finger tip. The patient made a good recovery, and began to gain flesh, but very shortly pain set in over the liver, with fever and a quickened pulse, and, towards the end of the month, Worrall made out a mass in the right hypochondrium, with dulness and impaired respiration at the base of the right lung. Vaginal examination disclosed nothing. On August 4 she had a very severe attack of hepatic pain, and died after being comatose for an hour; she had been slightly delirious for some nights previously; the urine continued normal. No *post mortem* could be obtained. Dr. Forster's clinical diagnosis was confirmed by Dr. Windeyer's examination of the curetted scrapings—and it was his report, which is given in detail, with several illustrations, that led Worrall to try and rediscover the patient.

THE DEPORTATION OF CHORIONIC VILLI AND ITS SIGNIFICANCE.

HITSCHMANN (*Zeits. f. Geb. u. Gyn.*, Bd. liii., S. 14), on the basis of histological investigation of specimens of tubal pregnancy, tries to show that under the term "deportation" Veit has included two different conditions: (1) Villi from tubal pregnancy arrested in the veins adjoining the seat of the ovum but still connected with their original stem, and (2) villi detached from the ovum and deported in the veins more or less away from it. The former is a condition which, in tubal pregnancy, is physiological; it is merely that displaced parts of the placenta serve to enlarge the intervillous spaces and extend the actively resorbent surfaces; the villi grow inside the eroded vessels and are in no sense "deported." The latter condition constitutes deportation proper, and is of importance in the genesis of primary chorionepitheliomatous tumours outside the uterus. The importance Veit attaches to deportation Hitschmann cannot recognise in either condition.

PLACENTAL TUMOUR.

LABHARDT, Basle (*Hegar's Beitrage*, Bd. viii., Hft. 2), reports a case of chorioma placentæ et hæmatoma deciduæ serotinæ. On the maternal side of the placenta, about three fingers' breadth from its edge, there was a small dark red growth embedded in the placenta, to the other tissue of

which it was attached only by a small pedicle near the edge. The tumour extended almost through the entire thickness of the placenta and proved to be an angioma of the vessels of the villi. The patient showed a remarkable tendency to hæmorrhage. Earlier in her pregnancy a polypoid hæmatoma had developed in the decidua ; following the shaking of a railway journey she had repeated hæmorrhage, followed by premature detachment of the placenta, induction of labour and death of the foetus.

GENITAL TUBERCULOSIS.

ROSENSTEIN, Berlin (*Monats. f. Geb. u. Gyn.*, Bd. xx., Heft 4), is led from the examination of seven cases to conclude that no case of tuberculosis affecting the ovary only, and not involving the peritoneum or tube, has been recorded that is not open to objection. The infection of the tubes is seldom an ascending one, the inflammation being generally continuous from above, or conveyed by the blood. Tubal tuberculosis is bilateral and at first attacks the mucosa, and just as in the ovaries, is subject to rapid retrogressive changes. Characteristic alterations can furnish a diagnosis without any staining of bacilli.

TUBERCULAR PERITONITIS.

LONGYEAR (*Amer. Jour. Obstet.*, Nov., 1904) records a variety of tubercular peritonitis which he calls pseudo-membranous monocystic. It is characterised by the formation of a thick, white, fibrinous pseudo-membrane covering the parietal peritoneum all over the tubercular surface, and cementing the coils of intestine together in such a way as to form a sac, of greater or less capacity according to the progress of the disease, and containing straw-coloured fluid, with jelly-like masses and shreds floating therein. The treatment is abdominal section, evacuation of the fluid, and thorough washing out of all shreds and gelatinous masses with normal salt solution, thorough drainage by glass or rubber tube, and both abdominal and vaginal when necessary. The sac requires frequent washing out until the pseudo-membrane has disintegrated, and the purulent discharge has ceased. Creosote, cod-liver-oil, supporting diet and suitable hygienic surroundings are essential. The prognosis is unfavourable.

J. F. J.

LOCALISED PERITONITIS FROM A FOREIGN BODY, SIMULATING A METASTASIS OF AN OVARIAN TUMOUR TO THE BLADDER.

OPITZ, Marburg (*Monats. f. Geb. u. Gyn.*, Bd. xx., Heft 4), in removing a cystic ovarian tumour, the contents of which included much cholesterin, a yellowish-white thickening, the size of half-a-crown, was found on the bladder, and was removed on the supposition that it was a metastasis. The histological structure of this specimen showed that between nodules consisting chiefly of giant cells, there were numerous gaps which represented the former seats of crystals of cholesterin dissolved out during the fixation of the specimen in alcohol. These crystals probably were the remains, after absorption, of the contents of a ruptured cyst emptied and encapsuled on the bladder.

BENIGNANT OVARIAN NEW GROWTHS, ESPECIALLY MYOMA.

BASSO, Dresden (*Archiv. f. Gyn.*, Bd. lxxiv., S. 70), has met with 45 published cases of fibromyoma of the ovary, and reports upon two of the kind and one of myoma. His examinations support the idea that the muscular tissue of these growths is derived from the walls of the vessels, as he could not detect any trace of transference of muscular fascicles from neighbouring organs to the tumour.

CLINICAL REMARKS ON OVARIAN TUMOURS.

LIPPERT, Leipsic (*Archiv f. Gyn.*, Bd. lxxiv., S. 389), reports upon 638 ovarian tumours and parovarian cysts treated by operation in the Leipsic University Frauenklinik, and in the private practice of Professor Zweifel, during the years 1887-1903, with a mortality for malignant growths of 13 per cent., for benign 3·7 per cent., or for the whole 5·17 per cent. Ascites complicated 83 of the 129 malignant tumours, a percentage of 64·34, but only 18·47 per cent. of the benignant growths. The tumours are classified as (1) Glandular cystoma, 389; (pseudo-mucinous, 342; pseudo-papillary, 13; serous, 34). (2) Papillary cystoma, 30. (3) Dermoid cystoma, 66. (4) Fibroma, fibromyoma, 11. (5) Sarcoma, 16. (6) Carcinoma, 68. (7) Other tumours, malignant or in malignant degeneration, 15. (8) Parovarian cysts, 43. The clinical aspect of the cases is discussed from the most varied standpoints.

HERNIA OF THE OVARY.

HEEGAARD (*Bibliotek f. Laeger*, 1904, Nos. 5-8) in this monograph shows that the idea that the so-called congenital inguinal hernia of the ovary depends on an anomaly corresponding to the descent of the testicle, is quite untenable. He points out that in such hernia the sac only is congenital, the hernia is developed afterwards and, for anatomical reasons, is more commonly met with in children. He describes two cases hitherto unpublished. The first is one of special interest: In a girl four weeks old, an inguinal hernia of the ovary on the left side became incarcerated in consequence of torsion of the pedicle; the left ovary and tube were removed, and one month after the operation there was a swelling in the scar which could not be reduced. This swelling proved to be the right ovary, and its reduction was effected by an incision into the canal of Nuck, which was patent.

ON EMBRYOMA OF THE TUBE.

ORTHMANN, Berlin (*Zeits. f. Geb. u. Gyn.*, Bd. liii., S. 119), describes an atheromatous tubal cyst extirpated by himself, and then narrates the few cases of embryoma of the tube that have been recorded, only five others in all, and some very imperfectly described. In his own case, lying almost quite free within a greatly dilated tube, which was patent at each end, there was a rudimentary embryonal design. The capsule of the tumour consisted of the tubal wall, greatly stretched, and exhibiting almost the same changes which are found in a sactosalpinx due to inflammatory processes. One peculiarity, however, was the fatty infiltration of the folds of the mucosa and the ingrowth of hair into its substance. The contents of the tube consisted of the typical compound which is accepted as the product of the embryo. The embryonal body, which was attached to the tube wall by a very thin pedicle, contained elements of all three embryonal layers.

TUBAL PREGNANCY WITH COEXISTING ACUTE PYOSALPINX.

HITSCHMANN, Vienna (*Zeits. f. Geb. u. Gyn.*, Bd. liii., S. 1), says that a causal influence in the tubal implantation of the ovum upon catarrhal and, more especially, upon gonorrhœal processes, is hardly disputed, but most authors accuse chronic changes and suppose that acute gonorrhœa in the tube would prevent implantation. The case he

reports controverts this supposition. The mucous membrane of the tube exhibited signs of recent gonorrhœal inflammation, and perimucous abscesses. This inflammatory process, which arrested the normal progress of the fertilised ovum, was necessarily the primary one. In regard to implantation in the wall of the tube the histological details of the case are of interest, as the author made sure that the veins opened did not serve for the enlargement of the intervillous spaces, but that almost the whole of the ovum stuck fast in the dilated vein. Weigert's method of staining showed that nearly the whole surface of the ovum was invested with elastic tissue in dense bundles or broken up by foetal cells. The placenta, therefore, seems to develop only in the capillaries, while in the tube the ovum spreads out in the veins.

ECTOPIC GESTATION TO TERM.

V. LINGEN, St. Petersburg (*Zentralb. f. Gyn.*, 1904, No. 50), reports a successful operation on a tertipara, aged 37, which revealed a full term ectopic gestation with a dead foetus in an unruptured tubal sac. The sac was hour glass in shape and simulated two tumours; one contained the placenta, the other the foetus and the umbilical cord, which, however, was not inserted into the placenta but into the wall of the sac.

TWIN TUBAL PREGNANCY.

SCHAUTA (*Zentralb. f. Gyn.*, 1905, No 2) divides twin pregnancies involving the tube into 3 categories (1) Simultaneous intrauterine and extrauterine pregnancies. These are the most numerous; Patellani in 1896 collected 37 already published. (2) Two ova developed in one tube; of this kind Schauta has found 19 recorded. (3) An ovum is very rarely situated in each tube, as recorded by Kristinus, Psaltoff, and Frederick. Schauta reported a recent case of the second kind.

WEINLECHNER reported a fourth case in which there was an ovum in each tube; both tubes burst at the end of the first month. He also mentioned that he had operated for tubal pregnancy on a woman from whom Schauta had previously removed one tube for the same cause, and suggested that it was a question whether it was not desirable to remove both tubes in such cases as a matter of prophylaxis. This was negatived by SCHAUTA and v. ERLACH,

and WERTHEIM said the proportion of recurrences was only about 6 per cent. and too low to justify such mutilation; simultaneous extrauterine and intrauterine pregnancy was not unusual, at least 100 cases had been collected since Patellani's article.

OVARIAN PREGNANCY.

CALMANN (*Muenchener m. Wchus.*, 1905, No. 5) exhibited to the Hamburg Medical Society, on January 24, 1905, a specimen of ovarian pregnancy not open to any objection whatever, neither tube, fimbriæ nor infundibulo-pelvic ligament taking any part in the formation about the fertilised ovum in the ovary. Remarking on the rarity of such cases he said 34 had been recorded.

PRIMARY ABDOMINAL PREGNANCY.

LINCK, Danzig (*Monats. f. Geb. u. Gyn.*, Bd. xx., Heft. 6), reports that at the operation upon a woman with the symptoms of severe internal hæmorrhage, not only fresh blood was found in the peritoneal cavity, but a chorionic placenta, the epithelium of which, as demonstrated by the microscopical examination, had grown into the serosa of the pouch of Douglas to such an extent as to form an intimate organic connection with the peritoneum. The histological examination excluded the idea of any secondary process. The genital organs, uterus, tubes, and ovaries appeared at the operation absolutely normal, their peritoneal investment also normal, and there was no trace of residua or colouration from past hæmorrhage anywhere in the neighbourhood of the small pelvis. Linck holds that the implantation of the ovum in the posterior peritoneal fold in the pouch of Douglas was in this case primary.

THE CONDITION OF THE VESSELS IN TUBAL PREGNANCY.

FELLNER, Vienna (*Archiv. f. Gyn.*, Bd. lxxiv., S. 481), in the examination of series of sections of three tubal pregnancies of from two to three weeks' gestation, found that the arterial vessels, as they approached the intervillous spaces, appeared to be filled with spindle cells and round cells. This proliferation in the lumen of the vessel arose from thickenings of the intima, and the cells were decidual ones. This casts some doubt upon the widely received opinion that cells of the periphery of the ovum (Langhans' cells) become displaced into the veins (deportation), the truth apparently

being that decidual cells are formed in the arterial vessels, and the process is therefore rather an autothrombosis than deportation.

DECIDUAL CELL FORMATION IN THE APPENDIX IN TUBAL PREGNANCY—PERIAPPENDICITIS DECIDUALIS.

HIRSCHBERG, Berlin (*Archiv. f. Gyn.*, Bd. lxxiv., S. 620), reports upon two cases of right tubal pregnancy with adherent appendices successfully treated by laparotomy. In one of these two cases there was proliferation in the appendix of decidual cells derived from the connective tissue cells of the serosa. Such metamorphosed connective tissue cells are absolutely distinct from the hypertrophic peritoneal endothelium met with in plastic peritonitis of all kinds, or after hæmorrhage into the peritoneal cavity.

FŒTAL HEART SOUNDS.

SARWEY (*Zentralb. f. Gyn.*, 1904, October 1) asserts that a skilled auscultator can detect the fœtal heart sounds much earlier than four and a half months. He has always been able to do so between the thirteenth and eighteenth weeks, and once even in the twelfth, generally just above and rather behind the symphysis.

PHLEBECTASIS IN THE GRAVID UTERUS AND ITS CLINICAL IMPORTANCE.

HALBAN, Vienna (*Monats. f. Geb. u. Gyn.*, Bd. xx., S. 313), reports a case of this rare condition. In a primipara, aged 26, the interruption of pregnancy was indicated by repeated hæmorrhages in the early months. Some tissue removed by Schultze's forceps along with the placenta led to further examination, which revealed a deep laceration of the cervix and perforation of the uterus, and the uterus was thereupon extirpated. Upon section, an extreme degree of phlebectasis was visible, which must have been due to some specific gestation change in the veins. The great clinical importance of this case lies in the primary insufficiency of the pains, the extreme atony after delivery, and the extreme friability of the uterine wall.

APPENDICITIS DURING PREGNANCY.

SCHLEYER (*Russkie Vratsch*, 1904, Nos. 27-28) describes four cases of appendicitis during pregnancy; three were operated upon, one of which died, and the fourth left the

hospital without operation. In all the cases the pregnancy terminated prematurely. The one which was fatal became very much worse after the course of the spontaneous abortion, while in the one which was not operated upon, and in which the abortion set in only at the beginning of the treatment, and was rapidly completed artificially, the general condition materially improved. Schleyer concludes that, owing to its peculiar course and the special indications for operative interference, appendicitis in pregnant women is to be differentiated from the same affection in others. The only rational and certain means of dealing with it is by well-timed operation; the medical attendant must employ every possible means to prevent the premature onset of labour, but if travail has once set in and cannot be arrested, prompt but careful evacuation of the uterus is indicated.

THE REACTION OF PREGNANCY ON THE FŒTAL ORGANS AND THEIR PUERPERAL INVOLUTION.

HALBAN, Vienna (*Zeit. f. Geb. u. Gyn.*, Bd. liii., Heft 2), in an article based on exact histological examination of the mammæ and genitalia of 21 new born fœtuses, arrives, practically, at the following conclusions:—The reaction of pregnancy on the maternal system is to be attributed to the effects of chemical material. In the child, changes take place quite similar to those in the mother. The female fœtus exhibits an hypertrophy and hyperæmia of the womb; and the decidual reaction in the mother appears to have an analogy in a menstrual reaction in the fœtus. The well-known genital hæmorrhage in new-born girls is the next stage in this reaction. The mammæ of the fœtus hypertrophies during gestation, just in the same way as the mother, and exhibits characteristic histological changes. Moreover in the male fœtus the mammæ and the prostate react like the mammæ of the female, exhibiting hypertrophy and the same histological changes. In the same way the poison of pregnancy has analogous effects in the fœtus as in the mother, as regards leucocytosis, increase of fibrin, renal affection, and œdema.

The active products of pregnancy are derived from the placenta, to the chorionic epithelium of which an internal secretion must be attributed. After delivery, these products of the placenta act no more, and both in mother and child processes of involution take place in all the organs which

during pregnancy were hypertrophied, and regeneration of those injured by intoxication.

Eclampsia is the effect of a deeper intoxication by the poison normally in action during pregnancy. The poisons of that disease come from the placenta, circulate in both maternal and foetal systems, and, in each, cause analogous changes; when the injurious effects have not gone too far, the affected organs may, after the placenta is separated, be again completely restored.

SPINAL PUNCTURE IN ECLAMPSIA.

KROENIG, Jena (*Zentralblatt. f. Gyn.*, 1904, No. 39), in two cases of eclampsia ascertained that the pressure of the liquor cerebri in the subarachnoid space was enormously increased, amounting, during the convulsions, to between 500 and 600 mm. of water or even more. He used Quincke's apparatus, which is well adapted for estimating the pressure and at the same time allows any desirable quantity of fluid to be abstracted without renewed puncture. Relatively large quantities of the fluid could be withdrawn before the pressure was reduced to the normal average (120 mm.) in one case 37.5, and in the other 47 cc.m. He also punctured the arachnoid in another case and all three recovered, but the number is too small to draw any definite conclusions, especially as in two of the cases vaginal Cæsarean section was another factor in the treatment.

HENKEL, Berlin (*ibid.*, No. 45), practised spinal puncture in eclampsia, in Olshausen's Klinik, as long ago as 1901, and gives a short report on sixteen cases, of which four ended fatally (25 per cent., about the ordinary mortality). The spinal fluid was in some cases more or less increased, in others normal in amount. He abstained from publishing the cases as he concluded that the course of the disease was in no way affected by the puncture.

KLEINWAECHTER, Prague (*ibid.*), points out that T. A. Helme, of Manchester, reported a case of lumbar puncture in eclampsia (*ante*, p. 84), to our Society in April, 1904, an account of which was published in the *Lancet* in the same month.

KROENIG (*ibid.*, No. 49) protests that his object in spinal puncture was not therapeutical, but merely to determine whether, in eclampsia, the pressure in the subarachnoid space was increased.

ECLAMPSIA AND DECAPSULATION OF THE KIDNEY.

SIPPEL, Frankfort (*Zentralb. f. Gyn.*, 1904, No. 45), on theoretical grounds and the basis of an autopsy, referring to a previous article of his own (*ibid.*, 1904, No 15), in which he suggested that the relief afforded by section of the renal capsule, or of the kidney itself, upon anuria and albuminuria, accidentally discovered by Reginald Harrison, was a surgical point that should be borne in mind in connection with eclampsia, draws attention to a decapsulation of the kidney performed, by Edebohls, on a primipara aged 23, on account of severe eclampsia with gestatory nephritis, the convulsions having recurred two days after forced delivery during coma. The woman recovered. Sippel insists on the need of exact observations upon which a positive opinion may be founded, as a preliminary to the general acceptance of Edebohls' operation.

ECLAMPSIA AND CÆSAREAN SECTION.

WANNER, Duesseldorf (*Zentralb. f. Gyn.*, 1904, No. 45), reports two instances of the most severe form of eclampsia, eight to fourteen days before term. Both children were delivered alive, but the mother in the first case died forty-eight hours after abdominal Cæsarean section, the other woman, delivered by vaginal hysterotomy, recovered.

VAGINAL CÆSAREAN SECTION IN PUERPERAL ECLAMPSIA.

CARSTENS (*Amer. Jour. Obstet.*, November, 1904) refers only to those very serious attacks, whether the first, second, or third, where the convulsions do not cease, but, unless there is intervention, follow one another in rapid succession until death ends the scene. In such cases, the only chance for the patient is prompt delivery, but he has abandoned rapid dilatation, multiple incisions in the cervix, and similar devices, in favour of Duehrssen's suggestion of vaginal Cæsarean section, mainly on the principle that cutting is better than tearing. He reports three cases. In the first, two deep lateral incisions were made so as to cut the fibres of the internal os. In the two later cases, the bladder was separated bluntly from the uterus up to the peritoneum, and then with the knife a clean cut was made in the middle line of the uterus up to the internal os. The child was delivered in about seven minutes, and in another seven minutes the placenta was removed and the incision in the uterus sewn up with dry sterilised catgut. The median

incision is to be preferred to the lateral, since it avoids the risk of wounding or tearing the large vessels at the side of the uterus. In each case the prompt delivery saved the patient. He thinks that any general practitioner ought to be able to do this operation.

Discussion.—ZINKE said that a general practitioner ought not to interfere in these cases, if he had the opportunity of securing the help of a well-equipped specialist. LONGYEAR thought that this operation would replace the old methods of dilating by rubber bags, &c., which had been very unsatisfactory. STAMM thought that it was better to make an anterior and posterior incision, since then they would not have to be made so long or so deep. SCHWARZ objected to the name of the operation, for it was not, practically speaking, a Cæsarean section at all.

J. F. J.

VAGINAL CÆSAREAN SECTION.

H. v. BARDELEBEN, Berlin (*Zentralb. f. Gyn.*, 1904, No. 46), has examined the condition of the uterus in eight women in whom hysterotomia vaginalis anterior had been performed, in most cases for eclampsia, and found the results most favourable. In five instances the form of the portio was perfectly restored, two had indentations within physiological limits, and only one a cleft of any consequence. There were no serious displacements of the uterus, though there was anteposition in one case, and retroversion with anteflexion in two others. In none of the cases was there any uterine discharge or hæmorrhage due to the operation. In his opinion, as a method of emptying the uterus, the operation has many advantages over dilatation.

ACCOUCHEMENT FORCÉ.

ZINKE (*Amer. Jour. Obst.*, November, 1904) discusses the possible methods of accouchement forcé, and draws the following conclusions: (1) The graduated metal or vulcanite dilators and the ordinary bladed dilators are mainly employed preparatory to digital, manual, and bag dilatation of the cervical canal or os uteri. (2) The bag or hydrostatic dilators, preferably Champetier-de-Ribes bag and its modifications, should be employed only when time is not an important element in the case, and when the cervix is so soft that the bag can be easily introduced. This method is contra-indicated in central placenta prævia, and in eclampsia,

mild or severe. If in this condition it is necessary to empty the uterus, deep incisions of the cervix, or vaginal or abdominal hysterotomy, give the best results for mother and child. (3) For the manual dilatation of Harris and the bi-manual dilatation of Bonnaire and Edgar, a soft and dilatable cervix is absolutely essential. When time is an important element, they are to be preferred to the bag. But the life of the fœtus is often lost, and, unless great care is observed, sepsis, tears, hæmorrhage, shock, and sometimes even death of the mother, may occur. (4) Deep incision of the cervix and Duehrssen's vaginal Cæsarean section are destined to play an important rôle in the management of forced labours in the future. It is the method of choice in the presence of sepsis of the vagina, when the cervix is intact, whether hard, elongated, or not, or is the site of extensive cicatrization. (5) Cæsarean section should only be done when the child is viable, and manifests signs of life and vigour, and in the presence of placenta prævia, detached placenta, or eclampsia associated with a closed cervix. If quickly done under these circumstances, it entails less risk to both mother and child than any other mode of delivery. If there is the slightest disproportion between the parturient tract and the child, it is to be preferred to Duehrssen's operation. (6) The Bossi and similar dilators are dangerous instruments, and sooner or later will reach their final destination in the lumber room of obstetric instruments.

Discussion.—SCHWARZ pointed out that central placenta prævia could only be diagnosed when the cervix was dilated, and that then the child should be delivered without a Cæsarean section. From his experience he was prepared to give the Bossi dilator a further trial. ROSS would leave eclamptic cases out of consideration. In others, he would give the preference to Cæsarean section. He condemned the Bossi dilator.

CARSTENS in placenta prævia advised turning, but in exceptional cases Cæsarean section might be necessary.

J. F. J.

REPEATED CÆSAREAN SECTION.

V. LEUWEN, Utrecht (*Ann. Gyn. Obst.*, 1904, October), has collected 117 cases of repeated Cæsarean section, from the study of which he concludes that: (1) Post-operative troubles are infrequent, and the woman's capability for

work is seldom permanently impaired. This point, however, has been comparatively little studied. Abel, reporting on 34 cases from Zweifel's Klinik, notes that in 5 there was pain during the catamenia, but in only one instance was the ability to work impaired, though the abdominal wound suppurred in 13, and silk ligatures were expelled in 9 cases through the abdominal wall and once through the bladder. In 20 cases in Kouwer's Klinik 18 were traced, of whom 5 were pregnant and in good health, 3 others had been happily delivered prematurely, 2 had aborted. Two ventral herniæ had caused but little trouble. There were adhesions between the uterus and abdominal wound in 9 cases, in only one of which was there complaint of pain. Silk ligatures were discharged by suppuration in 2 cases. There were only 2 of the 18 women who suffered from incapacity for their work, and that only temporarily. (2) The repeated operation did not compromise the patient's fertility. After one Cæsarean section, 137 women have conceived 194 times. Of these pregnancies, 117 were terminated by repetition of the operation (Porro in 13); of the other 77, 21 by natural labour at term; 22 by the induction of premature labour, 8 by spontaneous and 3 by induced abortion; 3 by symphyseotomy; 3 by embryotomy; 3 by the forceps; 2 by version and extraction, and there was rupture of the uterus in the cicatrix or elsewhere in 6 cases. (3) As regards the uterine wound, while many operators have been unable to find any trace of the cicatrix of a previous Cæsarean section, in 24 of the 194 pregnancies in which the operation was repeated the uterine wound had not healed perfectly, and the cicatrix ruptured in 4, while it was extensile throughout in 14 and in parts in 6 cases. v. Leuwen attributes this to faults in technique or infection rather than to any particular suture material, and suggests care in excluding the decidua from the suture to avoid the introduction of germs from it into the musculosa, and also that the ligatures should be cut off as short as possible to avoid irritation of the peritoneum, or, better, that their ends should be buried beneath the serosa. (4) There were peritoneal adhesions present in 76 of the 117 repeated sections; on the significance of such adhesions there is much difference of opinion; v. Leuwen considers them troublesome and dangerous, though not especially so in causing abortion, which is less frequent in pregnancy after Cæsarean section than in ordinary gravid women. (5) Infection is no doubt

the cause of imperfect healing of the uterine wound in many cases, and also that of many peritoneal adhesions. Olshausen has noted the frequency of pyrexia after Cæsarean section, and in 59 cases in various clinics v. Leuwen found it occurred in 90 per cent. Considering the difficulties attending the preparation of these patients for operation this is not surprising. (6) The mortality of the repeated operation is less than that of primary Cæsarean section. Of 104 of the repeated operations only 3 were fatal. This is no doubt due to the fact that, taught by experience, the women seek advice before labour has commenced, and thus not only avoid delay and misapplied attempts to hasten or effect delivery, but are admitted into hospital under more favourable conditions.

P. Z. H.

SPONTANEOUS RUPTURE OF CICATRIX OF CÆSAREAN SECTION.

EKSTEIN, Teplitz (*Zentralb. f. Gyn.*, 1904, No. 44). A woman delivered twice by perforation, and once by Cæsarean section, at the end of her fourth pregnancy, suffered from spontaneous rupture of the uterus while she was washing the room. On laparotomy, three days afterwards, it was found that the cicatrix of Fritsch's transverse incision had given way throughout its extent. Porro's operation was performed, but the woman died an hour and a half afterwards. Examination of the uterus showed that the whole of the scar was permeated by placental tissue. Ekstein suggests that in future the uterus should be sutured with a narrow leaden ribbon, which would give the cicatrix a natural resistance.

MUNRO KERR (*J. Obs. Gyn, Brit. Emp.*, 1904, November), relates a similar case at term without any warning. He blames the fundal incision, and refers also to MEYER'S case (*Zentralb. f. Gyn.*, 1903, p. 1416).

RUPTURES OF THE UTERUS IN THE SCARS OF FORMER LABOURS.

LABHARDT, Basle (*Zeits. f. Geb. u. Gyn.*, Bd. liii, Heft 3), reports three cases which show the importance of cicatrices in the uterus, especially in its lower segment, in subsequent labours. The cases in which the scars affected the supravaginal part of the cervix seem particularly dangerous; the thinning of the tissue there is most extreme, and the giving

way of the scar is most to be feared, on account of the proximity of the peritoneum. This is to be remembered in connection with Duehrssen's deep incisions and vaginal Cæsarean section.

RUPTURE OF THE UTERUS DURING LABOUR.

IVANOF, MOSCOW (*Ann. Gyn. Obst.*, 1904, August, September and October), contributes an elaborate article on the etiology, prophylaxis and treatment of rupture of the uterus, based on the study of material accumulated during the last twenty-five years in the Maternity of Moscow and on the recent literature on the subject; he formulates the following conclusions:—

(1) The majority of ruptures in cases of placenta previa are produced by some act of violence.

(2) The same may be said of cases of transverse presentation.

(3) When a case of transverse presentation has been submitted to clumsy attempts to hasten delivery before the arrival of the accoucheur, there is a predisposition to rupture during the operation.

(4) The decapitating hook of Braun, a very imperfect instrument, may cause a rupture.

(5) The majority of ruptures produced by violence are found on one side or other of the os, and are prone to be longitudinal and to involve the cellular tissue of the broad ligaments.

(6) In cases of hydrocephalus of the child, rupture of the uterus is often due to this condition being recognised too late.

(7) In cases of contracted pelvis, rupture may take place under the influence of distension and compression of the inferior part of the uterine wall between the child's head and the prominences or depressions in pelvic surfaces.

(8) In contracted pelvis, previous labours may predispose to rupture owing to pressure upon lesions of the uterine wall and subsequent resulting cicatrices.

(9) In flat pelvis, spontaneous ruptures are almost always produced transversely in the supravaginal portion of the uterine cervix, and the rupture generally occurs very soon after the beginning of labour.

(10) The great majority of cases of so-called "colporrhæxis" are transverse ruptures of the supravaginal portion of the uterine cervix.

(11) The conservative treatment of rupture in cases of contracted pelvis after several protracted labours accompanied with difficult operations, is decidedly dangerous, especially when any cicatrices can be detected by palpation in the supravaginal portion of the cervix.

(12) Beside the modifications of the uterine wall above-mentioned, or due to malignant tumours or defective development of the organ, inflammatory cellular infiltration is another important predisposing factor in causing rupture.

(13) Some pathological modification of the elastic tissue of the organ has generally been invoked to account for rupture, but no such change has ever been demonstrated in ruptured uteri. The only changes observed consist in physiological modifications supervening during pregnancy or labour, or during the puerperal period.

(14) The results of conservative treatment of rupture of the uterus during labour are only half as favourable as those of surgical intervention.

(15) Every rupture of the uterus during labour should be dealt with by a surgical operation, which alone can offer the means of arresting hæmorrhage and attending to the wound.

P. Z. H.

HEBOTOMY.

LEOPOLD, Dresden (*Zentralb. f. Gyn.*, 1904, No. 46), reports on 5 cases of hebotomy performed on the principles of Doederlein and Gigli. The mothers all did well, and had a normal childbed; three of the children were still alive.

GIGLI, Florence (*ibid.*), in a short but vigorous article defends his rights in the operation he calls "lateral section of the pelvis," especially against van de Velde (*ante. p. 126*), who calls it "hebotomy." The latter term has found more acceptance in Germany, but Gigli's claim to priority is generally admitted. There is little new in Gigli's article; he lays down two fundamental conditions, however. (1) The incision must be made outside the symphysis pubis; (2) and it should be also outside the insertion of the ligamenta pubovesicalia.

HOFMEIER, Wuerzburg (*Muenchener m. Wchus.*, 1905, No. 1, p. 51), has performed this operation as an alternative to perforation with most satisfactory result. The child extracted by forceps did well. The woman had a normal childbed and was able to walk well four weeks after delivery.

v. FRANQUÉ, Prague (*ibid.*, p. 52), also reports favourably (two cases).

ZWEIFEL (*ibid.*, 1905, No. 1) defends symphyseotomy and says that Gigli has no claim to priority in regard to lateral section, as he calls it, save and except as regards his wire saw.

DANGERS OF THE GLASS CATHETER DURING PARTURITION.

HUNNER, Baltimore (*Amer. Med.*, 1904, November 5 p. 805), was consulted in a case in which a glass catheter used by the medical attendant was broken between the descending head and the symphysis pubis, and half its length left in the bladder. Labour proceeded normally except for a slight perineal tear, for which four catgut sutures were inserted. No bladder symptoms appeared till the tenth day, when frequency of micturition was noticed. The only one of the four sutures unabsorbed was then removed, and, with due precautions and the use of cocaine, a No. 10 Kelly's speculum was passed into the bladder, in the Sim's position, and nearly the whole of the broken catheter was extracted with the alligator forceps, but owing to its curved shape, the speculum had to come with it. To detect and remove the remainder, in four small pieces, the patient was supported in the knee-breast position. There had been turbidity of the urine, and the cystoscope disclosed decided hyperæmia, but the patient was given cystogen thrice daily and copious draughts of water, and there was no further appearance of cystitis. There are theoretical objections, at all events, against the use of even a metal catheter during labour, and Hunner recommends a soft rubber one as the only secure method of avoiding traumatic injury in the first and second stages of labour; though its aseptic manipulation is a more difficult matter than that of either glass or metal instruments.

FORMALIN IN PUERPERAL SEPSIS.

HOERSCHELMANN (*St. Petersburg m. Wchns.*, 1904, *Amer. Med.*, 1904, ii., 82) reports: A primipara, aged 24, began to complain of malaise in the seventh month. She had been well till then and thought she had overworked herself making hay. The day before her admission she had severe pain, and discharged discoloured amniotic fluid. She was examined with every antiseptic precaution and the next day gave birth spontaneously to a macerated fœtus, the amniotic fluid being very foetid. A putrid placenta was expressed two hours later. Temperature normal, but next

day rigor, temperature 104° , pulse 150. Intrauterine douche of boric acid, icebag locally and ergot internally. Repeated chills, high fever and foetid discharge; next day, lysol douches. Three days later an enema was given consisting of a pint of a 1 per cent. solution of salt containing eight drops of formalin and, at the same time, opium by the mouth. The patient had a stool within ten minutes, her temperature fell somewhat and she felt much better. During the night she had profuse sweats and the symptoms of sepsis practically vanished; she made a rapid recovery.

SEROPATHY IN PUERPERAL FEVER.

HAMILTON (*Amer. Jour. Obst.*, November, 1904) realises clearly that the majority of cases are caused by the streptococcus, but that a mixed infection may produce symptoms so similar that, without a bacteriological examination, a diagnosis cannot be made. We must, however, admit as a possibility the lessening of the mortality by the serum treatment. He reports in full three serious cases in which examination had proved the infection to be due to the streptococcus; in all three cases, following the serum injection there was a fall of temperature and pulse. Auxiliary treatment was also adopted, such as strychnine, alcohol sponging, antiseptic douching and stimulating diet, and recovery followed, the temperature becoming practically normal by the sixth or eighth day of treatment.

J. F. J.

HOFFMANN, Salzwedel (*Deutsche m. Wchs.*, 1904, No. 46), records a case successfully treated by Aronson's serum.

PEHAM, Vienna (*Archiv. f. Gyn.*, Bd. lxxiv., S. 47), reports upon 44 cases treated in Chrobak's Klinik with Paltauf's antistreptococcus serum obtained from horses injected with cocci from cases of sepsis, peritonitis, puerperal processes and erysipelas. The action of the serum was more definite in the cases in which the uterine secretion contained streptococci only. Early administration and a comparatively large dose, 100 ccm. at one time, appeared most important. No deleterious effect was noticed, even when the infection was not from streptococci. The necessary local treatment was carried out in all the cases, 31 of which recovered.

PILCER and EBERSON, Tarnow (*Therap. Monatsch.*, October, 1904), report upon 28 cases, of which only 4 were fatal, a happy result that must be attributed to the

action of the serum. The serum is no specific, but, in conjunction with other measures, is a powerful means of overcoming puerperal infection. Its action is declared by promoting the formation of leucocytes. It should be given once or several times in doses of from 40 to 60 grammes.

V. JAWORSKI, Warsaw (*Zentralb. f. Gyn.*, 1904, No. 45), considers that in puerperal infection no artificial serum is as good as the so-called surgical one, that is to say, a 0·84 per cent. solution of chloride of sodium injected with a sterile syringe subcutaneously or deeply into the subcutaneous connective tissue. Frequent small injections (10 to 100 ccm.), once or twice a day, act better than large infusions. Healthy glands and sound kidneys are essential.

PYÆMIA ; SUCCESSFUL LIGATURE OF THE UTERINE VEINS.

BUMM, Berlin (*Muenchener m. Wchs.*, 1904, p. 2115), reported to the Charité Medical Society that in two instances of chronic pyæmia he had obtained an uninterrupted recovery by ligaturing the hypogastric veins as suggested by Freund. The operation is more quickly done from the peritoneal cavity, but care was necessary to avoid the uterus.

PSEUDO-HERMAPHRODISM.

MOISER, Winchester (*Lancet*, 1904, October 15), reports the following case: a patient admitted to the Royal Hants County Infirmary on June 18, 1904; she had severe pain in the left ovarian region lasting eight days, with slight epistaxis on one or two days. She was aged 19, rather masculine in appearance, with a voice lower in tone than most women; no hair on her face. Pubic hair normal in amount. Breasts and mons veneris poorly developed; labia majora normal, labia minora very small. Clitoris 1·5 inches long; glans, prepuce and frænum well developed, imperforate, the meatus urinarius being in a position normal in the female. No hymen, vagina narrowed at upper end and blind. Neither uterus, ovaries, tubes or testicles could be made out even under anæsthesia.

The patient had never menstruated, but every month since Christmas, 1893, she had had epistaxis at regular intervals, accompanied with aching pain in the left ovarian region, and lasting five days.

A laparotomy was performed, and a vermiform appendix three inches in length containing seven hard fæcal con-

cretions was removed. No internal genital organs were found. Her temperature was normal throughout, and to the time of writing she had no return of the pain.

The case hardly justifies its title. The date of the operation is not given. Possibly the molimina may return.

HERMAPHRODISMUS FEMININUS EXTERNUS.

FRIEDRICH (*Muenchener m. Wchs.*, 1905, No. 5, p. 240) showed to the Greifswald Medical Society a virginal individual aged 19, with an imperforate penis, or clitoris 4 cm. long, who had never menstruated, had a bass voice, a male larynx, and masculine hair on the abdomen. The external genitals and vagina were well developed, the uterus small and like a mere ribbon. There were several abdominal tumours, solid and cystic, one very near the right kidney, but none connected with the uterus. Laparotomy disclosed bilateral ovarian tumours, which were easily extirpated. In the four weeks since the operation the clitoris had atrophied to a remarkable extent. Friedrich referred to the way in which men, even fifty years old, assumed the female type after castration and amputation of the penis for carcinoma.

GRAWITZ reported on the tumours; the right was an ordinary ovarian cystoma, the left a dermoid, a teratoma, the chief portion of which was a rhabdomyosarcoma.

NOTES.

WE have with regret to record the following deaths:—

Mr. THOMAS HENDERSON POUNDS, F.R.C.S., a Fellow of the British Gynæcological Society, died at Derby on December 24, 1904. He was a skilled surgeon of good repute, and had no small share in establishing the Derbyshire Hospital for Women. He was only 48 years old.

Dr. JAMES ARMSTRONG, Consulting Physician to the Liverpool Lying-in Hospital, on December 26, 1904.

Dr. C. MACCALLUM, Emeritus Professor of Obstetrics and the Diseases of Women and Children in the McGill University, Montreal, on November 13, 1904, in his 81st year.

Dr. EDWIN HELLYER, on January 16, 1905, at Kensington, Philadelphia, a specialist in Obstetrics and the Diseases of Women.

Dr. J. M. LWOW, Privat-Dozent of Obstetrics and Gynæcology in the Faculty of Medicine at Kasan.

Dr. CLEMENT GODSON has been made a Corresponding Fellow of the Italian Obstetrical and Gynæcological Society.

One of the first three endowments of £1,000 under the Jessie Alice Palmer Fund, has been accorded to Queen Charlotte's Lying-in Hospital, in recognition of the services to science of Dr. W. S. A. GRIFFITHS: Westminster Hospital and the British Home for Incurables obtaining the others.

Dr. HENRY JELLETT, F.R.C.P.I., has been appointed to the post of Obstetric Physician and Gynæcologist to Steevens' Hospital, Dublin, and Dr. R. H. FLEMING to that of Gynæcologist to the City of Dublin Hospital, in each instance in succession to the late Dr. J. L. LANE.

Geheimrat FRANZ RITTER VON WINCKEL, Professor of Obstetrics and Gynæcology in the Ludwig-Maximilian's

University, at Munich, has been decorated with the Order of Merit of St. Michael, of the second class.

Geheimrat Dr. KUESTNER, of Breslau, has just celebrated his twenty-five years' jubilee as Professor. He was made Extraordinary Professor at Jena in 1879, and was called to succeed Professor FRITSCH when FRITSCH was transferred to Bonn.

Professor P. GRAWITZ, Director of the Institute of Pathological Anatomy at Greifswald, has been made a Medical Privy Councillor.

Dr. KARL MENGE, Professor of Obstetrics and Gynæcology and Director of the Frauenklinik in the University of Erlangen, has, for the time being, been appointed Director of the School for Midwives at that place.

Professor OPITZ is to be the Director of an institute for the treatment of persons suffering from cancer, which is about to be established by the Municipality of Marburg.

The title of Professor has been accorded to: Dr. KARL HOLZAPFEL, Privat-dozent of the Diseases of Women in the University of Kiel, and to Dr. MACKENRODT, of Berlin.

The following appointments as Privat-dozenten are announced, the *venia legendi* in Midwifery and Gynæcology having been granted to: Dr. ANTONINO BENTIVEGNA at Palermo; Dr. OSKAR PANKOW, Second Assistant to Professor KROENIG, at Freiburg; Dr. F. PINI at Modena; Dr. A. RIELANDER, Senior Assistant to Professor AHLFELD at Marburg, his inaugural lecture being "On the Perforation of the Living Child, and its Scientific and Legal Justification"; and to Dr. K. SKROBANSKY at the Military Medical Academy at St. Petersburg.

Dr. ADAM BAUEREISEN has been appointed Chief Physician to the University Frauenklinik at Erlangen, to succeed Privat-dozent Dr. STOECKEL, who has been transferred to the Charité Hospital at Berlin.

The Medical Council of the University of Halle-Wittenberg has conferred the degree of M.D. *honoris causâ* upon Dr. Phil. WILLY MERCK, one of the partners in the well-known firm of E. Merck, of Darmstadt, in recognition of his merits in connection with *Materia Medica*.

The eleventh congress of the Italian Obstetrical and Gynæcological Society will be held this year at Rome, under the presidency of Professor ERCOLE PASQUALI, of Rome. The Vice-presidents are Professor LUIGI MANGIAGALLI, of Milan, and Professor OTTAVIO MORISANI, of Naples; the Secretaries, Dr. CESARE MICHELI and Dr. F. S. ROCCHI, of Rome. Professor RAINERI, of Vercelli, will report on "Dystocia of the Neck of the Womb"; Professor MIRANDA, of Catania, "On the Indications for the Extirpation of the Adnexa in Hysterectomy."

THE FIFTH INTERNATIONAL CONGRESS OF OBSTETRICS AND GYNÆCOLOGY is announced to take place at St. Petersburg on September 11 to 18, 1905, under the patronage of His Majesty the Emperor of Russia. The Organisation Committee, of which the President is Professor Dmitri von Ott, and which includes the professors and representatives of all the most renowned schools of obstetrics and gynæcology of the Russian Empire, invites every one interested in these branches of medicine to take part in the proceedings of the meeting, which it ventures to hope will be as numerously attended as the previous ones, and it will do everything in its power to render the long journey and the visit to Russia as agreeable and comfortable to the foreign guests as possible. In regard to the international character of the Congress, and to facilitate all those joining it sharing in its work, the Committee have decided to allow the members themselves to choose any European language for their communications and discussions. The questions placed on the order of the day are as follows:—

- (1) Vaginal Methods in Gynæcology and Obstetrics.
- (2) Accouchement Forcé.
- (3) The Surgical Treatment of Uterine Fibromyomata.
- (4) The Critical Appreciation of the Different Methods of Operative Treatment of Retrodeviations of the Uterus.
- (5) Chorionepithelioma.

The General Secretary of the Committee is Dr. P. Sadowski, St. Petersburg (Nevski pr. 90); the Treasurer, Professor A. Zamschin, St. Petersburg (Wassiliewski Ostrow, University Line 3).

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- 1891 †CARTER, ARTHUR JOSEPH, M.R.C.S., 75, Shepherd's
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- F.F. †CARTER, GEORGE ROE, M.R.C.P.I., L.R.C.S.I.,
Oakhurst, 2, Anerley Park, s.e.
C. 1899-1901 & 1903-5.
- 1901 †CARTON, PAUL, M.D., B.Ch., B.A.O.Dub., 35, Rut-
land Square, Dublin.
- 1898 †CARWARDINE, THOMAS, M.S.Lond., F.R.C.S.Eng.,
16, Victoria Square, Clifton, Bristol.
- F.F. †CASE, WILLIAM, M.R.C.S., L.S.A., Denmark House,
Caister-on-Sea, Norfolk.
- 1895 †CHAMBERS, EBER, M.D.Aberd., M.R.C.S., District
Medical Officer City of London Lying-in Hos-
pital, 1, Wilmington Square, w.c.
C. 1902. V.-P. 1903.
- 1885 L. CHAMBERS, P. FLEWELLEN, M.D., 26, West Forty-
seventh Street, New York, U.S.A.
- 1898 †CHEETHAM, SYDNEY WILLIAMS, M.R.C.S., L.R.C.P.
Lond., 233, Romford Road, e.
- 1892 CHENEY, BENJAMIN AUSTIN, M.D., 40, Elm Street,
New Haven, Connecticut, U.S.A.
- 1898 CHESTNUT, HENRY, L.R.C.P., L.R.C.S.Edin., Tralee,
Co. Kerry, Ireland.
- 1898 CHESTNUTT, JOHN, B.A., R.U.I., L.R.C.S., L.R.C.P.,
Derwent House, Howden, East Yorkshire.
- 1904 CHIPMAN, WALTER WILLIAM, M.D., F.R.C.S.Edin.,
Assistant Gynæcologist Royal Victoria Hos-
pital, Montreal. Lecturer in Gynæcology,
McGill University, Montreal, Canada.

- Elected
- 1904 CLARK, ANN ELIZABETH, M.D.Berne, M.R.C.P.I.,
L. & L.M., 4, Calthorpe Road, Edgbaston,
Birmingham.
- 1895 †CLARK, TOM, L.R.C.P. & L.R.C.S.Edin., 1, West-
burn Street, Eaton Square, s.w.
- 1887 L. †CLARK, THOMAS KILNER, M.A., M.D.Camb.,
F.R.C.S.Eng., Surgeon Huddersfield Infirmary,
66, John William Street, Huddersfield.
C. 1895-7.
- 1898 *CLARKE, JOSEPH JOHN, L.R.C.P.I.
- 1898 †CLARKE, RICHARD ASHMORE, L.R.C.P., L.R.C.S.I.,
Surgeon to Teddington Cottage Hospital,
Goudhurst, Teddington.
- 1896 †CLAYTON, CHARLES HOLLINGSWORTH, M.R.C.S.,
L.R.C.P., 10, College Terrace, Belsize Park,
N.W.
- F.F. L. CLENDINEN, FREDERICK JOHN, L.R.C.P.Lond.,
L.R.C.P., L.R.C.S.Edin., 465, Malvern Road,
Hawksburn, Melbourne, Australia.
Hon. Loc. Sec.
- 1899 COATES-COLE, J. M., M.R.C.S., L.R.C.P., Mara-
caibo, Venezuela, S. America.
- 1904 †COHEN, RACHEL, M.B., Calcutta, F.R.C.S.I., 9,
Powis Square, Bayswater, w.
- 1903 COLE-BAKER, LYSTER, M.D., B.Ch., B.A.O.Dub.,
Bayfield, Kent Road, Southsea.
- 1893 †COLENZO, ROBERT J., M.A., M.D.Oxon., M.R.C.S.,
7A, Emperor's Gate, s.w. C. 1902-4.
- 1890 †COLLINS, E. TENISON, M.R.C.S., L.S.A., Gynæ-
cologist to Cardiff Infirmary, 12, Windsor
Place, Cardiff. Hon. Loc. Sec. C. 1896-8.
- 1903 COOK, JAMES WILLIAM, M.B., C.M.Aberd., 26,
Manchester Road, Bury, Lancashire.
- 1903 COOK, JOHN R., M.D., Fairmont, W. Virginia,
U.S.A.
- F.F. L. CORDES, AUGUSTE E., M.D.Paris, M.R.C.P.Lond.,
Privat-Doctent of Midwifery, ex-chirurgien
adjoind à la Maternité, 12, Rue Bellot, Geneva.
V.-P. 1897-9.
- 1900 †CORRIGAN, WILLIAM JENKINSON, F.R.C.S.I.,
L.R.C.P.I., L.M., Cloughmore, Splott Avenue,
Cardiff.

Elected

- 1900 †COWEN, RICHARD JOHN, L.R.C.P.I., L.M.,
L.R.C.S.I., L.M., 15, Half Moon Street,
Piccadilly, w.
- 1898 †CRABBE, JOHN SANDISON, L.R.C.P., L.R.C.S.Edin.,
Dundallen, Gravelly Hill, near Birmingham.
- 1895 CRAIG, WILLIAM BEDFORD, M.D., Visiting Gynæ-
cologist to St. Luke's and St. Joseph's Hospi-
tal, Denver, and Professor of Gynæcology
in the University of Denver Medical Depart-
ment, 122. East Sixteenth Avenue, Denver,
Colorado, U.S.A.
- 1900 †CRAMPTON, THOMAS HOBBS, L.R.C.P.I., L.R.C.S.I.,
L.M., 30, Myddleton Square, E.C.
- 1886 †CRESSWELL, PEARSON ROBERT, F.R.C.S.Edin.,
C.B., Surgeon Merthyr General Hospital, &c.,
Dowlais, Merthyr Tydvil.
- 1888 †CRISP, ERNEST HENRY, B.A.Camb., L.R.C.P.,
M.R.C.S., 43, Fenchurch Street, E.C.
- 1891 *CROMIE, JOHN, L.R.C.P., L.R.C.S.Edin.
- 1891 †CROOM, Sir JOHN HALLIDAY, M.D., F.R.C.P.Edin.,
F.R.C.S.Edin., F.R.S.E., Consulting Gynæ-
cologist to the Royal Infirmary, Consulting
Physician to the Royal Maternity Hospital,
and Lecturer on Midwifery and the Diseases
of Women at the School of the Royal Colleges,
Edinburgh, 25, Charlotte Square, Edinburgh.
C. 1884-6 & 1903-5. V.-P. 1887-9.
President 1902.
- 1901 CULLEN, THOMAS. M.D., Gynæcologist to the
Johns Hopkins Hospital, 3, West Preston
Street, Baltimore, U.S.A.
- 1898 CUMMING, GEORGE WILLIAM HAMILTON, M.D.
Durh., M.R.C.S., L.R.C.P., Annandale, Tor-
quay, S. Devon.
- 1895 †DAUBER, JOHN H., M.A., M.B., B.Ch.Oxon.,
Assistant Physician Hospital for Women,
Soho, 29, Charles Street, Berkeley Square, w.
C. 1900-1.
- F.F. †DAVIES, ELLIS THOMAS, M.D., Hon. Surgeon
Samaritan Free Hospital for Women, Liver-
pool, 1, St Domingo Grove, Liverpool.
C. 1901-3.

- Elected
- 1900 †DAVIES, JOHN STANLEY, M.B., C.M.Glasg., 262, Queen's Road, New Cross.
- 1897 *DELAMOTTE, PETER WILLIAM, M.R.C.P.Edin., M.R.C.S.E.
- 1904 DEMPSEY, ALEXANDER, M.D., R.U.L., L.R.C.S.I., 36, Clifton Street, Belfast.
- 1887 L. DEWES, FREDERICK JOSEPH, L.R.C.P.Lond., M.R.C.S.E., Surgeon-Captain Madras Army, c/o Messrs. A. Scott & Co., Rangoon, India.
- F.F. L. †DINGLE, WILLIAM ALFRED, M.D.St. And., L.R.C.P. Lond., M.R.C.S.Eng., L.S.A., Surgeon Royal Maternity Charity, 46, Finsbury Square, E.C. C. 1889-91. V.-P. 1892-4.
- 1888 L. DIRNER, GUSTAV, M.D., 9, Kossuth Utoxa, Buda Pesth, Hungary.
- F.F. †DIXON, WILLIAM EDWARD, L.R.C.P., F.R.C.S. Edin., M.R.C.S., Oulton Lodge, Oulton Broad, Lowestoft.
- 1891 DODD, THOMAS ANTONY, M.R.C.S.Eng., L.R.C.P. Edin., 4, Eldon Square, Newcastle-on-Tyne.
- 1898 †DODSWORTH, FREDERICK CHARLES, L.R.C.P., M.R.C.S., Ingleden House, Gunnersbury.
- F.F. †DOLAN, THOMAS M., M.D.Durh., F.R.C.S.Edin., Horton House, Halifax, Yorkshire. C. 1886-8, 1892-4 & 1902-4. V.-P. 1889-91.
- 1898 †DON, WILLIAM WALTON, M.D.Glasg., 466, Edgware Road, w.
- 1895 †DONALD, ARCHIBALD, M.A., M.D.Edin., M.R.C.P. Lond., Obstetric Physician Royal Infirmary, Manchester, Platt Abbey, Rusholme, Manchester. C. 1897-9.
- 1897 †DONALD, HUGH COLLIGAN, M.B., C.M.Glasg., 5, Gauze Street, Paisley.
- 1898 †DONOVAN, WILLIAM, M.D.Durh., L.R.C.P. & S. Edin., "Glandore," Erdington, Birmingham.
- 1889 L. DOUGLAS, RICHARD, M.D., 110, S. Spruce Street, Nashville, Tennessee, U.S.A.
- 1896 †DOWNES, JOSEPH LOCKHART, M.B., C.M.Glasg., 269, Romford Road, E.
- 1898 †DRAKE, A. THOMSON, M.B., R.U.I., 160, Lewisham High Road, S.E.

Elected

- F.F. L. †DRAPER, JAMES WILLIAM, L.R.C.P.Lond., M.R.C.S. Eng., L.S.A., Almondbury, Huddersfield.
- 1885 L. DUDLEY, EMILIUS CLARK, A.B., M.D., Professor of Gynæcology Chicago Medical College, 1617, Indiana Avenue, Chicago, U.S.A.
- 1905 †DUKE, ALEXANDER, F.R.C.P.I., L.R.C.S.I., L.M., 162, Gloucester Terrace, Hyde Park. w.
- 1902 DUNCAN, WILLIAM, M.D., M.R.C.P., F.R.C.S., Obstetric Physician and Lecturer on Obstetric Medicine Middlesex Hospital, Senior Physician Chelsea Hospital for Women, 6, Harley Street, w. C. 1904-5.
- F.F. *DUNDAS, MORDAUNT GEORGE, M.R.C.S., L.S.A.
- 1896 †DUTCH, HENRY, M.D.Brux., L.R.C.P.Lond., 8, Berkeley Square, w.
- 1891 †EASTES, THOMAS, M.D., F.R.C.S., 18, Manor Road, Folkestone. C. 1897-1900.
- 1890 ECCLES, F. R., M.D., Professor of Gynæcology at the Western University, Ellwood Place, London, Ontario, Canada.
- 1894 EDGE, FREDERICK, M.D., B.S., B.Sc.Lond., M.R.C.P.Lond., F.R.C.S.Eng., Surgeon to the Wolverhampton Hospital for Women, and to the Birmingham and Midland Hospital for Women, 54, Darlington Street, Wolverhampton. C. 1897-9 & 1903-5.
- F.F. †ELDER, GEORGE, M.D., Surgeon to the Samaritan Hospital for Women, Nottingham, 17, Regent Street, Nottingham. C. 1890-2* & 1904-5. V.-P. 1897-9.
- 1898 †ELLIOTT, FRANK PERCY, M.B., C.M.Aberd., 113, Grove Road, Walthamstow, N.E.
- 1898 †EMERSON, THOS. G., M.D., M.Ch., R.U.I., Wantage, Berks.
- 1894 EMMET, BACHE McE., M.D., 18, East Thirtieth Street, New York, U.S.A. Hon. Loc. Sec.
- 1892 ENGLEMANN, FREDK., M.D., Kreuznach, Germany.
- 1890 †ENGLISH, T. JOHNSTON, M.D.Brux., 13, Gilston Road, S.W. C. 1904-5.
- 1892 L. ENGSTROEM, Professor OTTO, M.D., Helsingfors, Finland.

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| Elected | |
| 1903 | EVANS, FREDERICK WM., M.D., C.M.Aberd.,
M.R.C.S., 21, Charles Street, Cardiff. |
| 1903 | †FEGAN, RICHARD ARDRA, M.R.C.S., L.R.C.P.,
Templecrone, Westcombe Park, s.e. |
| 1891 | FEHLING, Professor, M.D., Ruprechtsauer, Allee,
Strasburg. |
| 1886 | L. FENGER, CHRISTIAN, M.D., 269, La Salle Avenue,
Chicago, Illinois, U.S.A. |
| 1894 | *FENTON, FREDERICK ENOS, F.R.C.S., M.R.C.P.
Edin. |
| 1896 | †FENWICK, BEDFORD, M.D.Durh., M.R.C.P.Lond.,
Physician to the Hospital for Women, Soho,
20, Upper Wimpole Street, w.
V.-P. 1890-92, 1905. C. 1886-7 & 1902-4.
Libr. 1887-92. Hon. Sec. 1888-9. Editor
1892-4. |
| 1893 | *FERGUSON, GEO. GUNNIS, M.B., C.M.Glasg. |
| 1895 | †FERGUSON, JAMES HAIG, M.D., F.R.C.P.Edin., &c.,
Lecturer on Midwifery and Diseases of Women
School of Medicine of the Royal Colleges,
Gynæcologist Leith Hospital, Assistant Physi-
cian Royal Maternity Hospital, Edinburgh,
25, Rutland Street, Edinburgh. C. 1904-5. |
| 1899 | †FITZGERALD, EDWARD DESMOND, M.R.C.S.,
L.R.C.P., 5, Castle Hill Avenue, Folkestone. |
| 1903 | FITZGIBBON, GIBBON, M.D., B.Ch., B.A.O.Dub.,
Assistant Master Rotunda Hospital, Dublin. |
| 1900 | †FLEMING, ALEXANDER JOHN, M.D., M.Ch., R.U.I.,
3, Arkwright Road, Hampstead, n.w. |
| 1898 | †FLOYD, THOMAS *SARGENT, M.A., M.D.Dub., 16,
Devonshire Road, Claughton, Birkenhead. |
| 1898 | FOGERTY, WILLIAM A., M.D., M.Ch., M.A.O., Sur-
geon Limerick Hospital, 67, George Street,
Limerick. |
| 1903 | FOLEY, THOMAS McCRAITH, L.R.C.P., L.R.C.S.I.,
5, Queen Street, Scarborough, Yorks. |
| 1891 | †FORDE, ERNEST S., L.R.C.P. & S.Edin. Dalry,
Galloway. |
| 1902 | FRANZ, K., M.D., Professor of Obstetrics and
Gynæcology in the University of Jena, Ger-
many, Schaefferstrasse 1a. |

- Elected
- 1898 FRANZ, R. GRANT, M.D. Marburg and Berlin, Schwalbach, Germany.
- 1903 FRENCH, JOHN ALFRED, M.D., M.R.C.P., L.R.C.S.I., 375, Calle Urquiza, Rosario, Argentina.
- 1885 †FULLER, LEEDHAM, M.R.C.S.Eng., L.S.A.Lond., Oatlands, Streatham Hill, s.w.
- F.F. †GAGE-BROWN, CHARLES HERBERT, M.D., C.M. Edin., 85, Cadogan Place, s.w. C. 1898-9.
- 1895 †GALLOWAY, ARTHUR W., L.R.C.P., M.R.C.S., "Malverns," Epping.
- 1903 GALLOWAY, DAVID JAMES, M.D., Ch.M., F.R.C.P. Edin., The Manor House, Singapore.
- F.F. †GARDINER, BRUCE HERBERT JOHN, M.D., L.R.C.P. Edin., M.R.C.S., 48, Barry Road, East Dulwich, S.E.
- F.F. GARDNER, WILLIAM, M.D., Professor of Gynaecology in McGill University, 109, Union Avenue, Montreal, Canada. V.-P. 1887-9.
- 1904 GEORGE, JESSIE ELEANOR, L.R.C.P. & S. Edin., L.M. Dub., Ishwari Memorial Hospital, Benares, India.
- 1895 †GIFFARD, H. E., M.R.C.S., Denham House, Egham, Surrey.
- 1885 L. †GILES, PETER BROOME, M.R.C.S., L.R.C.P., Holne Chase, Bletchley, Bucks.
- 1900 †GLENN, JOHN HUGH ROBERT, M.D. Dub., F.R.C.P.I., Gynaecologist to Mercer's Hospital, 24, Lower Bagot Street, Dublin.
- 1897 †GODFREY, FRANK W. A., M.B., & C.M. Edin., Hon. Surgeon Scarborough Hospital and Dispensary, 5, Montpellier Terrace, Scarborough.
- 1891 †GODSON, CLEMENT, M.D., M.R.C.P., Consulting Physician to the City of London Lying-in Hospital, late Assistant Physician Accoucheur St. Bartholomew's Hospital, 82, Brook Street, Grosvenor Square, w.
Trustee. C. 1892-4, 1897-9, & 1904-5.
V.-P. 1902-3. Pres. 1895-6.
- 1886 L. GORDON, SETH CHASE, M.D., 157, High Street, Portland, Maine, U.S.A.

- Elected
- 1891 GOWANS, WILLIAM, M.D.Durh., F.R.C.S.Edin.,
Westoe House, Westoe, South Shields.
- 1896 GRAY, WILLIAM, M.D., C.M.Edin., Victoria Road,
West Hartlepool.
- 1891 GREEN, W. O., M.D., 709, 2nd Street, near Chest-
nut, Louisville, Kentucky. U.S.A.
- 1900 GREER, WILLIAM JONES, F.R.C.S.I., L.R.C.P.I.,
L.M., D.P.H., 2, Cheptsow Road, Newport,
Monmouthshire.
- F.F. †GRIFFITH, G. DE GORREQUER, L.R.C.P., M.R.C.S.,
late Senior Physician to Hospital for Women
and Children, Pimlico, 34, St. George's Square,
s.w., and New Indian Club, Whitehall Gardens,
s.w.
- 1885 L. †GRIMSDALE, THOMAS BABINGTON, B.A., M.B.Camb.,
M.R.C.S., Gynæcological Surgeon Liverpool
Royal Infirmary, 29, Rodney Street, Liverpool.
Hon. Loc. Sec. C. 1894-6.
- 1898 †GUNTON, GEORGE ANDREW, L.R.C.P.I., L.S.A., 3,
Sloane Court, s.w.
- 1895 HALL, ERNEST AMOS, M.D., C.M.Ont., L.R.C.P.
Edin., Burrard's Sanatorium, Vancouver,
British Columbia.
- 1885 L. HALL, RUFUS B., M.D., 37, Crown Street, Walnut
Hills, Cincinnati, U.S.A.
- 1897 †HARLEY, HENRY, M.D., R.U.I., 27, Victoria Road,
Battersea Park, s.w.
- F.F. †HARRIES, THOMAS DAVIES, M.R.C.P.Lond., F.R.C.S.
Eng., Surgeon Aberystwith Infirmary and Car-
diganshire General Hospital, Grosvenor House,
Aberystwith.
- 1898 †HARTT, CHARLES HENRY, L.R.C.P.I., L.R.C.S.I.,
L.M., 14, Croom's Hill, Greenwich, s.e.
- F.F. †HAULTAIN, FRANCIS WM. NICOL, M.D., F.R.C.P.
Edin., Physician for Diseases of Women,
Royal Dispensary, Lecturer on Midwifery and
Diseases of Women, Edinburgh School of
Medicine, 17, Rutland Street, Edinburgh.
Hon. Loc. Sec. C. 1896-8. V.-P. 1902-3.
- 1889 †HAWKES, A. E., M.D.Brux., L.R.C.P., L.R.C.S.
Edin., 22, Abercromby Square, Liverpool.

- Elected
- 1904 HAWKES, CLAUDE SOMERVILLE, F.R.C.S.Edin.,
Glencairn, Wickham Terrace, Brisbane,
Queensland.
- 1902 HAYES, GEORGE SULLIVAN CLIFFORD, M.R.C.S.,
L.R.C.P., Parncah, Purecal Lines, Bengal.
- 1901 HAYNES, Captain E. J. A., F.R.C.S., 390, Hay
Street, Perth, Western Australia.
- 1886 L. HEADLEY, W. BALLS, M.A., M.D., F.R.C.P., 4,
Collins Street, Melbourne, Australia.
C. 1896-8.
- 1887 *HEALD, BENJAMIN GREY, L.R.C.P.Edin., L.F.P.S.
Glasg.
- F.F. †HEBERT, PAUL ZOTIQUE, M.D., C.M.McGill,
L.R.C.P.Lond., 16A, Old Cavendish Street,
Cavendish Square, w. C. 1896-8.
- 1885 L. HEIBERG, WILHELM, M.D., Surgeon to the County
Hospital of Copenhagen, Frederiksberg, Copen-
hagen.
- 1898 †HELME, THOMAS ARTHUR, M.D.Edin., M.R.C.P.
Lond., M.R.C.S.Eng., Hon. Senior Assistant
Surgeon Clinical Hospital for Women and
Children, Manchester, Mayfield, Victoria Road,
Manchester. C. 1903-5.
- 1887 L. HETHERINGTON, GEO. ALBERT, M.D., St. John,
N.B., Canada.
- 1903 HIGHMOOR, RICHARD NICHOLSON, M.B., C.M.
Edin., Litcham, Swaffham, Norfolk.
- 1871 †HILL, J. STONELEY, M.B. & C.M.Edin., 33, Great
Charlotte Street, Blackfriars Road, S.E.
- F.F. †HILLS, AUGUSTUS PHILLIPS, M.R.C.S.Eng., Carlton
House, 1, Prince of Wales Road, Battersea
Park, s.w.
- F.F. †HINE, ALFRED LEONARD, L.R.C.P.Lond., M.R.C.S.,
L.S.A., Northwold, Moss Hall Grove, N.
Finchley. C. 1891.
- 1887 L. HOAG, JUNIUS C., M.D., 4669, Lake Avenue,
Chicago.
- F.F. †HODGSON, ROBERT HUGH, M.D.Durh., M.R.C.S.
Eng., 166, Peckham Rye, East Dulwich.
C. 1894-7 & 1901-3. V.-P. 1898-1900.
- 1895 †HOLLAND, C. E., M.B., C.M.Edin., Airdrie, The
Avenue, Kew Gardens, Surrey.

Elected

- F.F. †HOLLAND, EDMUND, M.D., M.R.C.P., F.R.C.S.,
Physician to the Hospital for Women, Soho,
1, Titchfield Terrace, North Gate, Regent's
Park, N.W. C. 1893-5.
- 1885 L. HOOPER, JOHN WILLIAM DUNBAR, L.R.C.P.,
L.R.C.S.Edin., Surgeon to the Women's Hos-
pital, Melbourne, 70, Collins Street, East
Melbourne.
- 1899 HORNE, ANDREW JOHN, F.R.C.P.I., 94, Merrion
Square, Dublin.
- 1903 †HOSFORD, BENJAMIN, M.A., M.D., M.Ch., M.A.O.,
R.U.I., 89, St. John's Road, Upper Holloway,
N.
- 1898 †HOWARD, ARTHUR WALTERS, M.R.C.S., L.R.C.P.,
83, Queen Street, Maidenhead.
- 1901 *HUGHES, GEORGE OSBORNE, M.D., &c.
- 1887 †HUTCHISON, GEORGE WRIGHT, M.D.Aberd.,
M.R.C.P.Edin., Chipping Norton, Oxon.
- F.F. †JAMES, W. CULVER, M.D., 15, Marloes Road,
Kensington, W. C. 1884-6.
- 1903 †JAMESON, JAMES ELLIOTT, M.B., B.Ch., B.A.O.
Dub., 16, Church Road, Richmond, Surrey.
- 1894 †JARDINE, JAMES, M.B., C.M.Edin., 3, Lichfield
Gardens, Richmond, Surrey. C. 1902-4.
- 1888 †JELLETT, HENRY, M.D.Dub., F.R.C.P.I., 61, Lower
Mount Street, Dublin.
Hon. Loc. Sec. C. 1902-4.
- 1887 †JESSETT, FREDERICK BOWREMAN, F.R.C.S.Eng.,
Surgeon to the Cancer Hospital, Brompton,
23, Brook Street, W.
C. 1891-2, 1894-7 & 1901-3.
V.-P., 1898-1900, 1904-5. Pres. 1893.
- 1883 L. JEWETT, CHARLES, M.D., 330, Clinton Avenue,
Brooklyn, U.S.A.
- 1897 *JOHNSTON, G. J. WALDRON, M.D., R.U.I.
- 1886 †JOHNSTON, JOHN, M.R.C.S.Eng., 2, Rocky Hill
Terrace, Maidstone.
- 1886 L. JOHNSTONE, ARTHUR, W., M.D., Madisonville
Road, Cincinnati, Ohio.

- Elected
- 1891 JOHNSTONE, GEORGE, W., L.R.C.P., Government Medical Officer, 3, Battery Road, Singapore.
- 1887 JONES, C. N. DIXON, M.D., 249, East 86th Street, New York, U.S.A.
- 1899 JONES, EVAN JAMES TREVOR, M.R.C.S., L.R.C.P., Ty-mawr, Aberdare, S. Wales.
- 1895 †JONES, JOHN, L.R.C.P., M.R.C.S., Claremont, Newlands Park, Sydenham, S.E.
- 1904 JONES, MARY DIXON, M.D., New York, U.S.A.
- 1893 †JORDAN, JOHN FURNEAUX, M.B., R.U.I., F.R.C.S. Eng., Surgeon Women's Hospital, Birmingham, 9, Newhall Street, Birmingham.
C. 1899-1901.
- 1895 †KEITH, GEORGE ELPHINSTONE, M.B., C.M.Edin., 7, Manchester Square, W.
Hon. Sec. 1897-9. C. 1900-1.
- 1889 L. KELLOGG, J. H., M.D., Battle Creek, Michigan, U.S.A.
- 1898 KELLY, HOWARD A., M.D., Univ. of Pennsylvania, Professor of Gynæcology and Obstetrics in Johns Hopkins University, 1406, Eutaw Place, Baltimore, Pa., U.S.A.
- F.F. †KENNEDY, JOHN BLYDESTYN, M.R.C.S.Eng., L.S.A., Stratford Hall, Stratford, E.
- 1903 KERR, JOHN MARTIN MUNRO, M.B., C.M., F.F.P.S. Glasg., Obstetric Physician Glasgow Maternity Hospital, 28, Berkeley Terrace, Glasgow.
- 1900 †KIDD, FREDERICK WILLIAM, M.D.Dub., Master of Coombe Hospital, Professor of Midwifery and Gynæcology, R.C.S.I., 17, Lower Fitzwilliam Street, Dublin,
C. 1902-3.
- 1886 L. KING, ALBERT F. A., M.D., 1315, Mass. Avenue, N.W., Washington, D.C., U.S.A.
- 1901 KING, J. E., M.D., Univ. Buffalo, 93, Niagara Street, Buffalo, U.S.A.
- 1898 †KINKEAD, RICHARD JOHN, M.D., L.R.C.S.I., Professor of Obstetrics, Queen's College, Galway, Forster House, Galway. C. 1905.
- 1839 KIRKLEY, C. A., M.D., 1105, Jefferson Street, Toledo, Ohio, U.S.A.
- 1904 KLEIN, Professor GUSTAV, M.D.Munich.

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- 1902 LACKIE, JAMES LAMOND, M.D., F.R.C.P.Edin., 2, Randolph Crescent, Edinburgh.
- 1898 LANDAU, L., M.D., Professor of Gynæcology of the University of Berlin, Berlin.
- 1902 LAST, CECIL EDWARD, M.R.C.S., L.R.C.P., Blessoe House, Littlehampton.
- 1886 L. †LAWRIE, JAMES MCPHERSON, M.D., Physician to the Weymouth Sanatorium, Greenhill, Weymouth. C. 1894-6, 1905. V.-P. 1899-1901.
- 1899 †LEA, ARNOLD WILLIAM WARRINGTON, M.D., B.S. Lond., F.R.C.S.Eng., Assistant to the Professor of Obstetrics, Owens College, Assistant Surgeon to the Clinical Hospital for Women and Children, Manchester, 274, Oxford Road, Manchester.
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- 1889 †LEIGH, W. W., L.R.C.P.Edin., M.R.C.S.Eng., L.S.A., Glyn Bargoed Treharris, R.S.O., South Wales.
- F.F. L. †LE PAGE, JOHN FISHER, M.D., L.R.C.P.Edin., The Poplars, Cheadle, Cheshire.
- F.F. *LESLIE, WILLIAM MURRAY, M.D.Edin., C.M., F.R.C.S.E.
- F.F. †LLOYD, SAMUEL, M.D., 60, Bloomsbury Street, Bloomsbury, w.c. C. 1904-5.
- 1902 LLOYD, THOMAS EDWARD, M.D.Brux., M.R.C.S., L.R.C.P., Woodstock House, Abergavenny, Monmouthshire.
- 1893 †LLOYDE, JOHN HY., L.R.C.P., L.R.C.S.Edin., 6, Harpur Place, Bedford.
- F.F. †LOW, RICHARD MARSDEN PILKINGTON, M.B., C.M., L.R.C.P., L.R.C.S.Edin., L.M., 70, Philbeach Gardens, s.w. C. 1896-8.
- 1901 LOWENTHAL, LOUIS L., M.R.C.S., &c., 3135, South Park Avenue, Chicago, U.S.A.

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1894 LUTAUD, AUGUSTE, M.D.Paris, Rédacteur en Chef du Journal de Médecine de Paris; Médecin Adjoint de l'Hôpital St. Lazare, 47, Boulevard Haussmann, Paris.
- F.F. †LYCETT, JOHN ALLAN, M.D.St. And., M.R.C.P. Edin., Consulting Gynæcologist Wolverhampton and District Hospital for Women, Gatcombe, Wolverhampton.
Hon. Loc. Sec. C. 1889-91.
- 1899 †LYLE, ROBERT PATTON RANKEN, B.A., M.D., B.Ch.Dub., Lecturer on Midwifery and Diseases of Women and Children, Durham University College of Medicine, 11, Ellison Place, Newcastle-on-Tyne
Hon. Loc. Sec. C. 1904. V.-P. 1905.
- F.F. †MACAN, SIR ARTHUR VERNON, M.B., M.Ch., M.A.O. Dub., F.R.C.P.I., King's Professor of Midwifery Trinity College, Obstetric Physician Sir P. Dun's Hospital, Ex-Master of the Rotunda Hospital, Dublin, 53, Merrion Square, Dublin. C. 1890-2.
V.-P. 1887-8 & 1904-5. Pres. 1889.
- 1885 L. †MACAN, JAMESON JOHN, M.A., M.D.Camb., Cheam, Surrey. C. 1895-7. V.-P. 1898-1900, 1905.
Editor, 1899-1905.
- 1899 †MCARDLE, JOHN STEPHEN, F.R.C.S.I., Surgeon to St. Vincent's Hospital, 7, Upper Merrion Street, Dublin.
- 1890 †MACCORMAC, JOHN SIDES DAVIES, L.R.C.P. & L.R.C.S.Edin., L.F.P.S.Glasg., 327, Chiswick High Road, w.
- 1895 †MCDONALD, JAMES, M.D.Edin., Bloxwich, Walsall, Staffs.
- 1898 †MACDONNELL, ALEXANDER, L.R.C.S.Edin. & L.S.A., Manor Lodge, Stamford Hill, N.
- 1902 *MCDOWELL, WILLIAM, jun., M.D., British Columbia.
- 1897 MACGREGOR, PETER, F.R.C.S.Edin., Rashcliffe, Huddersfield.
- 1889 L. MACKAY, WILLIAM ALEXANDER, M.D., F.R.C.S. Edin., Huelva, Spain.

Elected

- 1888 L. †MACKINTOSH, G. D., L.R.C.P.I., L.M.Edin., 74A,
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- 1898 †McMANUS, LEONARD STRONG, M.D., Mayo House,
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C. 1890-2 & 1900-2. V.-P. 1895-7 &
1903-5. Pres. 1898-9.
- 1897 †MACNAUGHTON-JONES, H. M., M.B., B.Ch., R.U.I.,
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West End Lane, n.w. Editor 1900-2.
- 1894 *MADDIN, JOHN WALSEY, jun., M.D.
- 1903 †MAILER, WILLIAM, M.B., C.M.Edin., Holmwood,
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- 1891 †MARTIN, CHRISTOPHER, M.B.Edin., C.M., F.R.C.S.
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Hon. Loc. Sec. C. 1897-9. V.-P. 1903-5.
- 1896 MATTICE, RICHARD ISA, M.D.McGill, L.R.C.P.
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- 1896 †MAYBURY, LYSANDER, M.D., M.Ch., R.U.I.,
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- 1891 MEEK, H., M.D., 331, Queen's Avenue, London,
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- 1887 MENDES DE LEON, M.A., M.D., Sarphati Straat, 1H,
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- 1886 L. MERRIMAN, HENRY P., M.D., 2239, Michigan
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- 1895 †MILLER, FREDK. R., M.D.Brux., L.R.C.P.Lond., 70,
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- 1887 †MORISON, ALBERT EDWARD, M.B., C.M.Edin.,
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- 1891 †MORISON, J. RUTHERFORD, M.B., F.R.C.S., Surgeon
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- 1894 MORLAND, CHARLES HENRY DUNCAN, M.B., B.S.
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- 1898 †MORRIS, RICHARD JOHN, M.D.Durh., M.R.C.S.,
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- F.F. †MORTON, THOMAS, M.D.Lond., M.R.C.S., L.S.A.,
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C. 1889-90 & 1899-1901.
- 1898 †MOSSE, HERBERT RYDING, M.D., M.R.C.S.Eng.,
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C. 1884-6. Hon. Sec. 1887-8. V.-P. 1889-91 & 1903-5. Libr. 1892. Treas. 1893-1900. Pres. 1901.
- 1902 †MOWLL, RICHARD ROTHWELL, M.B., B.S.Lond., Beresford, Hook Road, Surbiton.
- 1896 MURRAY, CHAS. F. K., M.D., M.Ch., M.A.O., R.U.I., Kenilworth House, Cape Town, S. Africa.
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- 1891 NEDWILL, COURTENAY, M.D., R.U.I., M.R.C.S., Christchurch, Canterbury, New Zealand.
- 1886 L. NELSON, DANIEL THURBER, M.D., 2400, Indian Avenue, Chicago, U.S.A.
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- F.F. L. NEUGEBAUER, FRANZ VON, M.D., Directeur de l'Hôpital Evangelique, Leszno, 33, Warsaw, Russia (Poland). V.-P. 1887-9.
- 1898 †NEVILLE, THOS., M.D., R.U.I., 123, Sloane Street, s.w.
- 1896 †NEWNHAM, WILLIAM HARRY CHRISTOPHER, M.A., M.B.Camb. M.R.C.S., Physician Accoucheur Bristol General Hospital, Chandos Villa, Queen's Road, Clifton. C. 1898-1900.
- 1898 NOBLE, CHARLES P., M.D.Maryland, 159, Locust Street, Philadelphia, Pa., U.S.A.

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- 1896 †O'BRYEN, JAMES WHEELER, M.D.Vermont,
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S.E.
- 1898 †O'CONNOR, WILLIAM MOYLE, M.A., M.D.Dub.,
Lyndhurst, Cargate, Aldershot.
- 1885 O'DONNELL, THOMAS JOSEPH, L.R.C.P.I., L.M.,
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- 1898 †O'HAGAN, PATRICK FRANCIS, L.R.C.P., L.R.C.S.
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- 1894 †OLIVER, JAMES, M.D., M.R.C.P.Lond., F.R.S.
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- 1898 †OPPENHEIMER, HEINRICH, M.D.Heidelberg,
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- 1905 OVERY, HENRY, M.B.Edin., F.R.C.S., 8, Devon-
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- F.F. †PADMAN, JOHN, M.R.C.S.Eng., 22, Bloomsbury
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- 1905 PAINE, ALEXANDER, M.D., B.S.Lond., D.P.H.,
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- 1888 L. PARKINSON, J. TAYLOR, M.D., Brook View, Crystal
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- 1898 †PARSONS, JOHN INGLIS, M.D., M.R.C.P., Physician
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- 1903 PESTALOZZA, ERNESTO, Professor of Clinical Obstetrics and Gynæcology, Florence, Via Alfani, 60. C. 1905.
- 1903 PETERSON, F. C., M.D. Buffalo, 606, East Genessee Street, Syracuse, N.Y., U.S.A.
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- 1902 PHILLIPS, JAMES, F.R.C.S.Edin., M.R.C.S., L.R.C.P., 2, Duckworth Grove, Bradford, Yorks.
- 1904 PHILLIPS, MARY ELIZABETH, M.B.Lond., Presbeli, Merthyr Cynog, Brecon.
- 1904 PHILLIPS, MILES HARRIS, M.B., B.S., F.R.C.S., Jessop Hospital for Women, Sheffield.
- F.F. L. PINARD, ADOLPHE, M.D., Professeur à la Faculté, Accoucheur de Lariboisière, 11, Rocquepine, Paris. V.-P. 1900-1.
- 1885 L. POLK, WILLIAM M., M.D., Ex-President New York Obstetrical Society, &c., &c., 7, East Thirty-Sixth Street, New York, U.S.A.
- 1886 †POPE, HARRY CAMPBELL, M.D.Lond., F.R.C.S., 6, Ashchurch Grove, Goldhawk Road, Shepherd's Bush, w. C. 1890-2.
- 1891 †POULTER, ARTHUR REGINALD, M.R.C.S., L.R.C.P., 4, Gordon Mansions, Gower Street, w.c.
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- F.F. L. †PUREFOY, RICHARD DANCER, M.D.Dub., F.R.C.S.I., Obstetric Surgeon Adelaide Hospital, late Master of the Rotunda Hospital, 20, Merrion Square, Dublin. C. 1884-6. V.-P. 1899-1901.
- 1895 †PUTSEY, WILLIAM H., M.D.Durh., M.R.C.S., Fleet-Surgeon (retired) R.N., 28, Ladbroke Gardens, w.

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- 1894 †RAMSAY, FRANK WINSON, M.D., B.S.Durh.,
F.R.C.S.Edin., Jesmond Dene, Bournemouth.
C. 1900-2.
- F.F. †RAWLINGS, JOHN ADAMS, M.R.C.P.Edin., M.R.C.S.
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Preswylfa, Swansea. C. 1889-90.
- 1903 RAYNER, DAVID CHARLES, F.R.C.S.Eng., Assist-
ant Physician Accoucheur Bristol General
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- 1898 †REDFERN, JOHN J., M.D., M.A.O., Surgeon to the
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ley Road, Croydon. C. 1905.
- 1887 L. REED, CHARLES A. L., M.D., Professor of Gynæ-
cology and Abdominal Surgery at the Cin-
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- 1905 †REES, RHYS BASIL, L.S.A.Lond., Priory House,
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Glasgow. C. 1888-9. V.-P. 1896-8.
- 1898 †RICE, GEORGE, M.D.Durh., 46, Friargate, Derby.
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C. 1884. V.-P. 1896-8.
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- F.F. L. *ROBERTSON, A. MILNE, M.D.Edin.

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- 1898 †ROBINSON, MALACHI J., M.D.Ch., R.U.I., 257, Essex Road, Canonbury, N.
- 1888 †ROBSON, ARTHUR W. MAYO, F.R.C.S.Eng., L.R.C.P. Lond., Emeritus Professor of Surgery Yorkshire College, Senior Surgeon Leeds General Infirmary, 8, Park Crescent, Portland Place, W. Hon. Loc. Sec. C. 1893-5, 1898-1900 & 1903-4. V.-P. 1896. Pres. 1897.
- 1885 L. ROSEBRUGH, JOHN WELLINGTON, M.D., Hamilton, Ont., Canada.
- 1888 L. ROSS, JAMES F. W., M.D., C.M., L.R.C.P.Lond., Professor of Gynæcology and Abdominal Surgery Ontario Medical College for Women, Gynæcologist to Toronto General Hospital, St. Michael's Hospital and St. John's Hospital for Women, 184, Sherbourne Street, Toronto, Canada. Hon. Loc. Sec.
- F.F. †ROUTH, CHARLES HENRY FELIX, M.D., M.R.C.P., Consulting Physician to the Samaritan Free Hospital, 52, Montague Square, W. V.-P. 1884-6 & 1896-8. C. 1888-9, 1891-4 & 1899-1901. Pres. 1890. Hon. Fellow. 1901.
- F.F. L. RUSSELL, LOGAN D. H., M.D., M.R.C.S., Glenfern, Halfway Tree, Jamaica.
- 1897 †RYALL, CHARLES, F.R.C.S., Surgeon to the Cancer Hospital, Surgeon to the Gordon Hospital, Surgeon to Out-patients London Lock Hospital, 51, Queen Anne Street, W. Hon. Sec. 1900-2. C. 1903-5.
- 1901 †St. AUBYN-FARRER, CLAUDE, L.R.C.P., L.R.C.S. Edin., 7, Westbourne Park Road, Porchester Square, W.
- 1902 SAVAGE, SMALLWOOD, M.A., M.B., B.Ch.Oxon, F.R.C.S., Surgeon Birmingham Lying-in Charity and Wolverhampton Hospital for Women, 133, Edmund Street, Birmingham. Hon. Sec. 1905.

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Pres. 1894. Hon. Fellow 1900.
- 1892 †SCHACHT, F. F., M.D., B.A.Camb., late Physician
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1897-9 & 1903-4. C. 1900-2.
- 1887 †SHAW, JOHN, M.D.Lond., M.R.C.P.Lond., Obstetric
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1895-7.
- 1901 SHEARER, ALFRED, M.B., Ch.B., c/o Dr. Purchas,
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- 1901 SHEPHERD, THOMAS WILLIAM, L.R.C.S.Edin.,
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- 1903 †SIMSON, HENRY J. FORBES, M.B., C.M.Edin.,
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C. 1900. V.-P. 1901.

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C. 1899-1900 & 1902-3. Treas. 1904-5.
- 1886 †SLOAN, SAMUEL, M.D., F.F.P.S.Glasg., Consulting
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- 1887 L. †SMART, DAVID, M.B., B.Sc.Edin., 74, Hartington
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- 1889 †SMITH, ALFRED J., M.B., M.Ch., M.A.O., R.U.I.,
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Dublin. C. 1896-8. V.-P. 1902-4.
- 1898 SMITH, ARTHUR LAPHORN, B.A., M.D., M.R.C.S.,
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C. 1898-9.
- F.F. L. †SMITH, HEYWOOD, M.A., M.D., M.R.C.P., 25,
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Hon. Sec. 1884-5. C. 1889-91 & 1898-
1900. V.-P. 1892-4, 1901-2 & 1904-5.
Pres. 1903.
- 1891 †SMITH, JAMES WILKIE, M.D., Balgonie House,
Ryton-on-Tyne, Durham.
- F.F. †SMITH, RICHARD T., M.D., M.R.C.P., Physician to
the Hospital for Women, Soho, 33, Wimpole
Street, w.
C. 1884-6, 1898-1900 & 1903-5. Hon.
Sec. 1889-90. V.-P. 1891-93.
- 1904 SMITH, WILLIAM ROBERT, M.D., B.S., F.R.C.S.
Eng., Beeston, Notts.

Elected

- F.F. †SMYLY, WILLIAM JOSIAH, M.D., T.C.D., F.R.C.P.I.,
F.R.C.S.I., late Master of the Rotunda Hos-
pital, President of the Royal College of
Physicians, Ireland. 58, Merrion Square,
Dublin. C. 1888-90 & 1901-3. V.-P. 1892-4.
Pres. 1900.
- 1895 †SMYTH, ALEXANDER CARSON, M.B., C.M.Edin.,
Lochiel, 16, Craven Park, Willesden, N.W.
- F.F. †SMYTH, BRICE, B.A., M.D., M.Ch., T.C.D., Con-
sulting Physician Hospital for Sick Children,
Physician Belfast Lying-in Hospital, 20, Uni-
versity Square, Belfast.
C. 1887-9. V.-P. 1889-91.
- 1905 †SMYTH, JAMES, M.B.: C.M.Edin., 77, Falcon Road,
Clapham Junction, S.W.
- 1893 †SMYTH, JOHN WALKER, L.R.C.P., L.R.C.S.Edin.,
13, Colebrook Row, City Road, N.
- F.F. †SPANTON, WILLIAM DUNNETT, F.R.C.S.Eng., Sur-
geon to the North Staffordshire Infirmary,
Chatterley House, Hanley, Staffordshire.
C. 1887-9 & 1901-4. V.-P. 1890-92, 1905.
- 1898 SPEARING, ANDREW, L.F.P.S.Glasg., Victoria
House, Albert Road, Eccles, Lancs.
- 1898 SPROTT, WM. J., M.D., M.Ch., R.U.I., Heath-
field, Eccles Old Road, Manchester.
- 1903 STEALY, JEREMIAH H., M.D., Ph.D., Freeport,
Illinois, U.S.A.
- 1898 STEKOULIS, CONSTANTIN, M.D., Péra, Rue Soute-
razi 7, Constantinople.
- 1885 STEVENSON, EDMUND SINCLAIR, M.D.Brux.,
F.R.C.S.Edin., Strathallan, Rondebosch.
Cape Town, S. Africa.
- 1899 STEVENSON, WILLIAM JOHN, M.D., C.M., M.C.P. &
S. Toronto. 391, Dundas Street, London,
Canada.
- 1892 STEWART-MCKAY, W. J., M.B., M.Ch., B.Sc., Aus-
tralian Club, 26, Darlinghurst Road, Sydney,
N. South Wales.
- 1888 L. STONE, ISAAC S., M.D., 1618, Rhode Island Avenue
N.W., Washington, D.C., U.S.A.
- 1893 STONEY, RALPH, L.R.C.S.I., L.R.C.P.I., Medical
Officer, Uganda Protectorate Service, Africa.

- Elected
 1886 †STRANGE, W. HEATH, M.D., 2, Belsize Avenue, Hampstead, N.W.
 1904 STURGE, MARY DARBY, M.D.Lond., 45, Hagley Road, Edgbaston, Birmingham.
 1892 L. SULLIVAN, W. H., M.D., 80, Collins Street, Melbourne, Victoria.
 1885 †SUNDERLAND, SEPTIMUS, M.D., M.R.C.S., M.R.C.P. Lond., Physician to the Royal Hospital for Women and Children, 11, Cavendish Place, Cavendish Square, W. C. 1894-6 & 1902-3.
 1892 L. SUTTON, R. STANBURY, M.D., 419, Penn Avenue, Pittsburg, U.S.A.
 1900 †SWANTON, J. HUTCHINSON, M.D., M.A.O., R.U.I., M.R.C.P.Lond., 40, Harley Street, Cavendish Square, W. Hon. Sec. 1901-4.
 C. 1905. Assistant Editor 1905.
- F.F. L. †TAYLER, WILLIAM HENRY, M.D.St.And., M.R.C.S. Eng., Hardicot, Kingsdown Road, Walmer, Dover, Kent.
- F.F. L. †TAYLOR, JOHN WILLIAM, F.R.C.S., Professor of Gynæcology Birmingham University, Surgeon to the Birmingham and Midland Hospital for Women, 22, Newhall Street, Birmingham.
 C. 1891-3, 1900-2, 1905. V.-P. 1894-6.
 Pres. 1904.
- F.F. †TEMPLE, THOMAS CAMERON, M.R.C.S., L.S.A., Shefford, Beds.
- 1898 †THOMAS, JOHN LYNN, F.R.C.S.Eng., 21, Windsor Place, Cardiff.
- 1885 †THOMSON, DAVID, M.D., Stourfield Park Sanatorium, Bournemouth (travelling).
 C. 1897-9.
- 1893 †THOMSON, GEORGE, M.B., C.M.Glasg., 72, The Avenue, Ealing, W.
- 1898 †TIVY, WILLIAM JAMES, F.R.C.P., F.R.C.S.Edin., 5, Victoria Square, Clifton, Bristol.
- 1895 †TRAVERS, F. T., M.B., B.S.Lond., F.R.C.S.Edin., Surgeon to the West Kent Hospital, 6, Clarendon Place, Maidstone.

Elected

- 1892 †TRAVERS, W., M.D., F.R.C.S., late Physician to the Chelsea Hospital for Women, 2, Phillimore Gardens, w.
C. 1894-6, 1900 & 1905. V.-P. 1897-9 & 1904. Treas. 1901-3.
- 1895 TREUB, HECTOR, M.D., Professor of Obstetrics and Gynæcology University of Amsterdam, Von-delstraat, 83, Amsterdam. V.-P. 1897-9.
- 1898 TROWER, ARTHUR, M.R.C.S., 104, Marina, St. Leonards-on-Sea.
- 1889 L. †TUOHY, JOHN FRANCIS, M.D., M.Ch., Lieut.-Col. I.M.S., Hova House, 1, Hova Terrace, Brighton.
- 1903 †TWEEDY, ERNEST HASTINGS, F.R.C.P.J., &c., Master of the Rotunda Hospital, Dublin, Rotunda Hospital.
- 1887 L. UNDERWOOD, EDWARD F., M.D., Port Bombay, India.
- 1885 L. VAN DER VEER, ALBERT, M.D., 28, Eagle Street, Albany, New York, U.S.A.
- 1895 †VAUGHAN-JACKSON, HERBERT FRANCIS, L.R.C.P., M.R.C.S., Potter's Bar, Middlesex.
C. 1904-5
- 1888 L. WALKER, HOLFORD, M.D., 56, Isabella Street, Toronto, Ontario, Canada.
- 1903 WALKER, JAMES FREDERICK, L. & L.M., R.C.P.I., L.R.C.S.I., Elm Lodge, Swallowfield, Reading.
- 1889 †WALLACE, ABRAHAM, M.D.Edin., C.M., F.F.P.S. Glasg., formerly Professor of Midwifery and Diseases of Women Anderson's College, Glasgow, 39, Harley Street, w. C. 1894-6.
- F.F. L. †WALTER, WILLIAM, M.A., M.D.Dub., F.R.C.S.I., Physician to St. Mary's Hospital, Manchester, 20, St. John's Street, Manchester.
Hon. Loc. Sec. C. 1884-6 & 1891-3. V.-P. 1888-90.

- Elected
 1895 WALTON, PAUL, M.D., Chirurgien-adjoint des
 Hopitaux de Gand, 33, Quai des Tonneliers,
 Ghent, Belgium.
- 1897 L. WARD, CHARLES, F.R.C.S.I., 116, Long Market
 Street, Pietermaritzburg, South Africa.
- 1891 WARD, J. L. W., J.P., L.R.C.P., Cladir, Merthyr
 Tydvil, Glamorganshire.
- 1895 †WHEATLY, A. W., M.B.Durh., M.R.C.S., 1, Ken-
 sington Square Mansions, Young Street,
 Kensington.
- 1903 †WHITCOMBE-BROWN, W. H., M.B., B.S., &c., High-
 field, Westcliffe-on-Sea.
- 1897 †WHITEHEAD, HENRY EDWARD, M.R.C.S., L.R.C.P.,
 475, Caledonian Road, Holloway, N.
- 1890 †WILLIAMS, CYRIL JOHN, L.R.C.P., Brookside,
 Woodhall Spa, Lincolnshire.
- 1897 †WILLIAMS, JOSEPH WILLIAM, M.R.C.S., L.R.C.P.,
 128, Mansfield Road, Gospel Oak, N.W.
- 1895 †WILLIAMSON, JOHN, M.B., C.M.Edin., Surgeon to
 Richmond Hospital, Rothsay House, Rich-
 mond, Surrey.
- 1888 L. †WILLIS, Lieut.-Col. C. FAN COURT, I.M.S., M.D.,
 M.R.C.P., Satara, Bombay Presidency.
- 1898 *WILSON, GEORGE DUNN, L.R.C.P., L.R.C.S.Edin.,
 481, Wandsworth Road, S.W.
- 1902 †WILSON, RALPH WILLIAM, M.D., C.M.Edin., The
 Moorings, Kew Gardens, S.W.
- F.F. L. WILSON, ROBERT T., M.D., Assistant Surgeon
 Women's Hospital of Maryland, 20, Park
 Avenue, Baltimore, Maryland, U.S.A.
- 1898 †WILSON, THOMAS, M.D., B.S.Lond., F.R.C.S.Eng.,
 87, Cornwall Street, Newhall Street, Bir-
 mingham.
- 1890 WOOD, JAMES C., M.D., 818, Rose Building,
 Cleveland, Ohio, U.S.A.
- 1891 L. †WOODS, HUGH, M.D., B.S., M.A.O., 26, Welbeck
 Street, W. C. 1905.
- 1889 L. WORRALL, RALPH, M.D., 20, College Street, Sydney,
 N.S.W. Hon. Loc. Sec.
- 1903 WYBAUW, R., M.D.Brux., Spa, Belgium.
- 1885 L. WYLIE, WALKER GILL, M.D., 28, West Fortieth
 Street, New York, U.S.A. V.-P. 1894-6.

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- 1898 YOUNG, H. C. TAYLOR, M.D., C.M., 221, Macquarie Street, Sydney, New South Wales.
- 1891 †YOUNG, MOFFAT, L.R.C.P., Victoria Road, West Hartlepool.
- 1897 †YOUNG, W. MCGREGOR, M.B., C.M.Glasg., 171, Woodhouse Lane, Leeds.

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