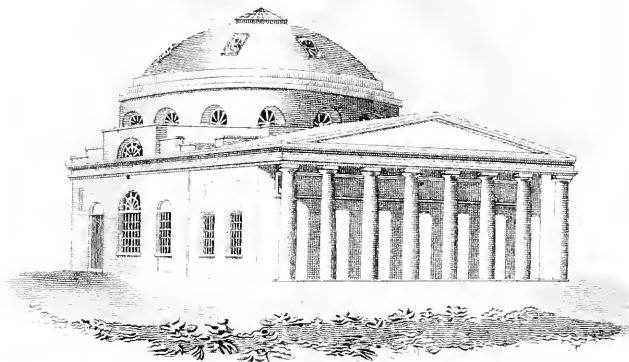
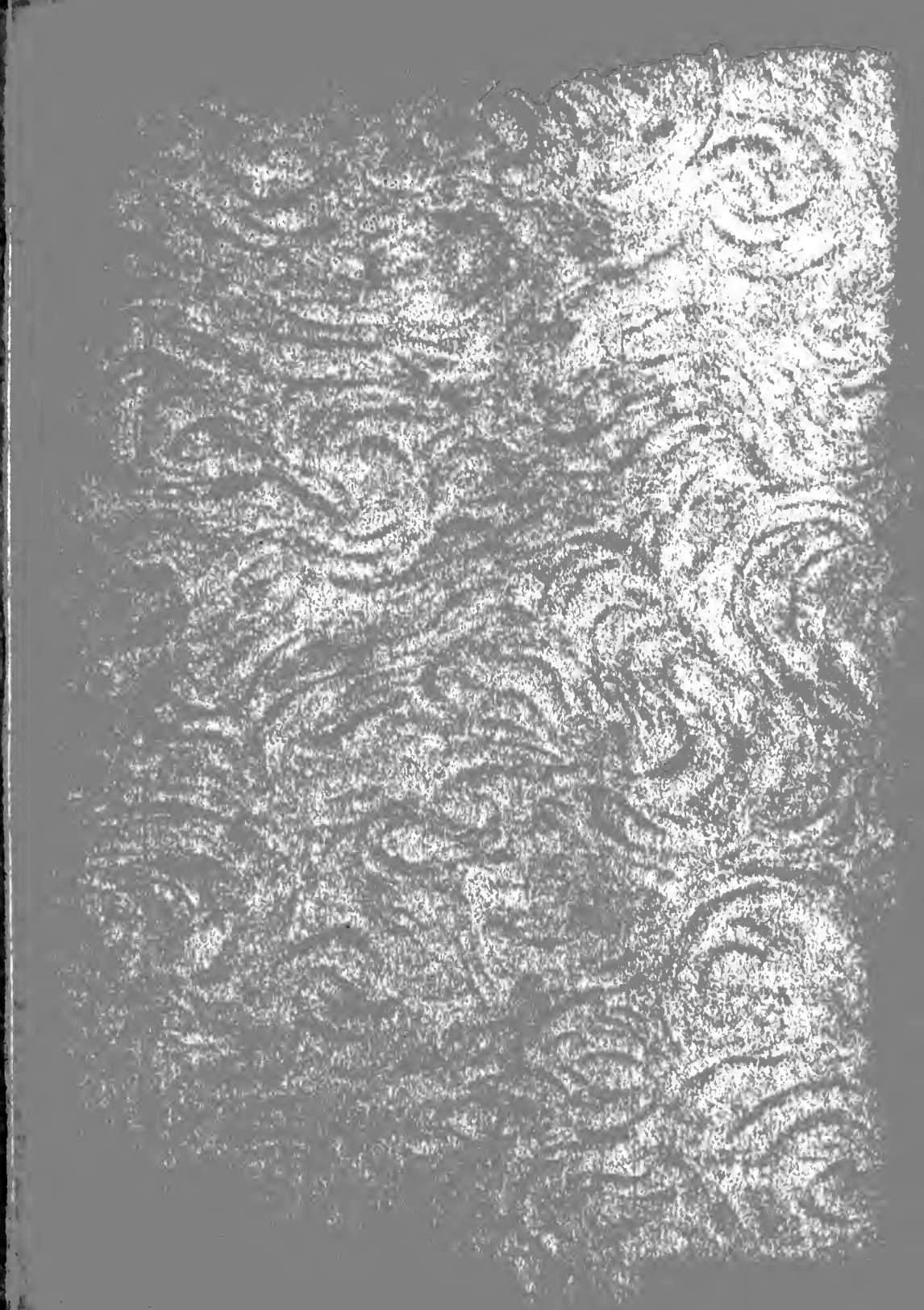
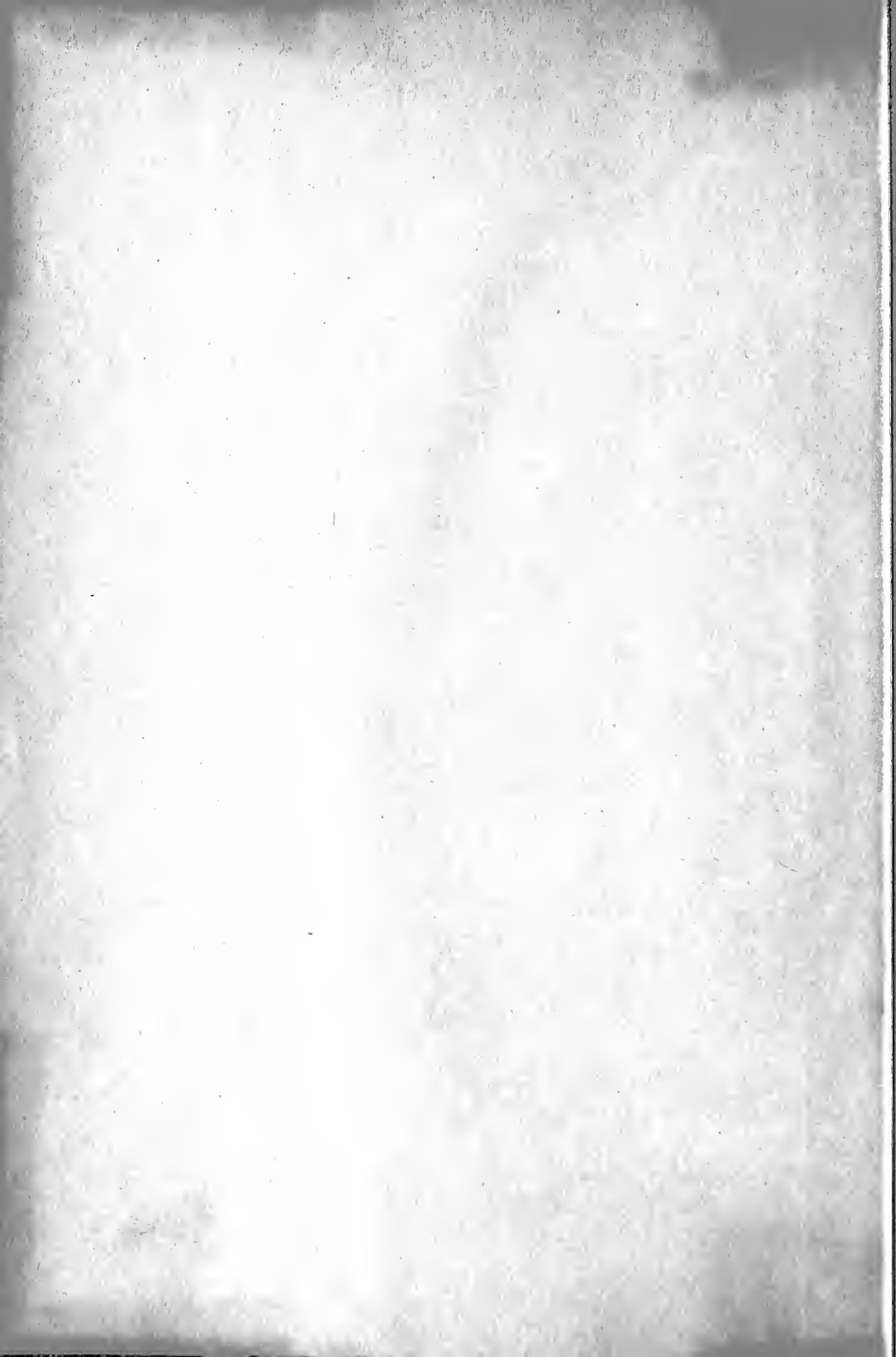



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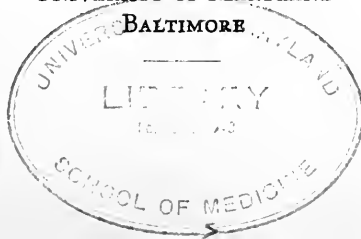
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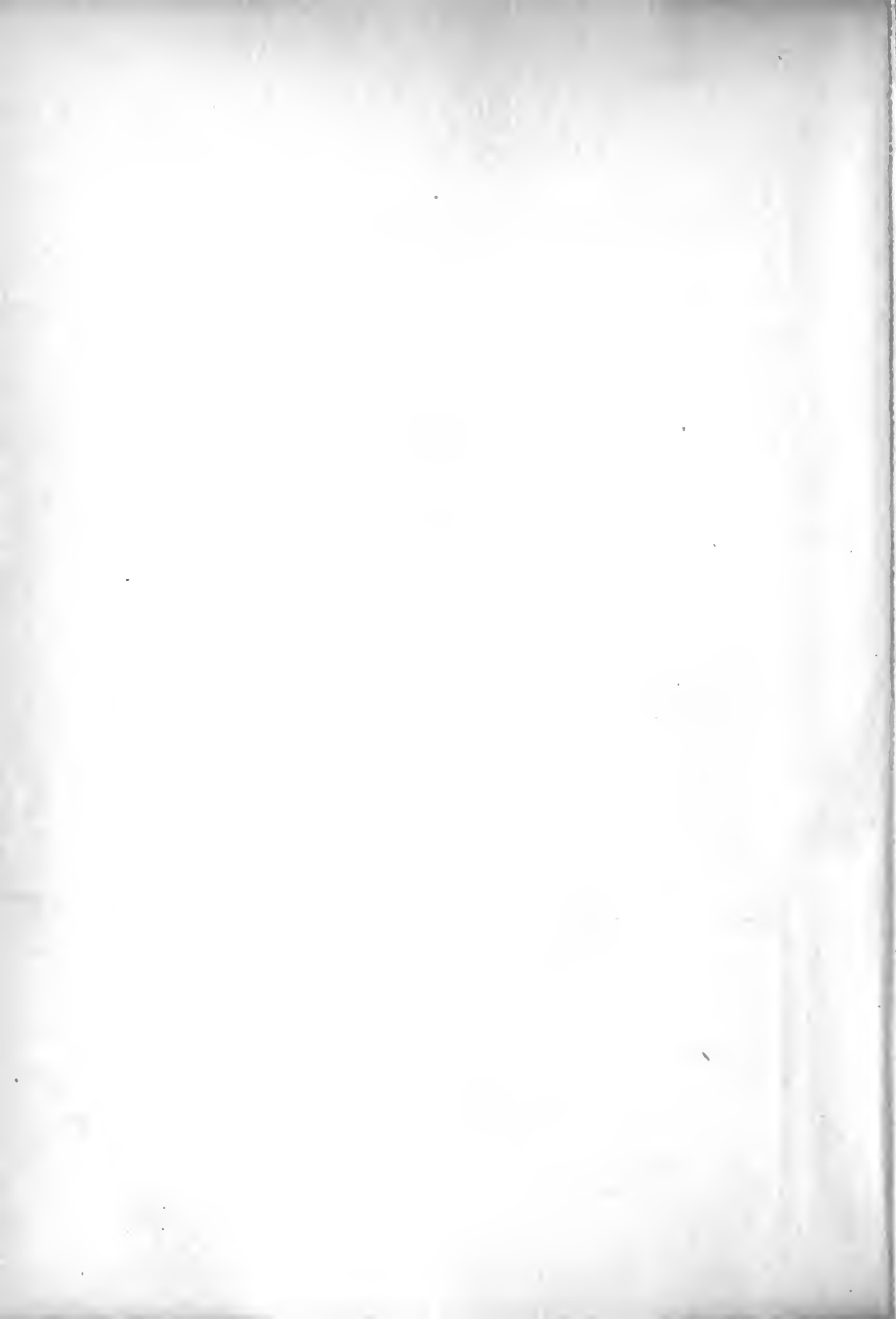
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# BULLETIN

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### THE CURRENT STATUS OF OBSTETRICAL ANALGESIA

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It can safely be said that the ideal method of obstetrical analgesia, amnesia and anesthesia has not yet been found. Much can be said against all of the drugs in use today, in spite of some of their obvious advantages and popularity. The literature on this subject is confusing and there are just as many individual champions as there are combinations of drugs in use today. Experimenters have employed these combinations in many series of cases and it is surprising how much they differ when working with the same group of substances. Elaborate claims for certain drugs are not substantiated by the findings of others and the entire literature is apparently and invariably marked with over-enthusiasm. No attempt has been made to cover the entire field in this presentation but to review the current opinion of the most widely used methods in the past five years.

Within this time, two incomplete nation-wide surveys have been made to ascertain the consensus in regard to popularity and use of the various known methods. C. E. Hunt, following his questionnaire, concludes that no routine method can be used in all cases and no method is without danger to mother and child. He found that there is an increase in the use of scopolamine which is most frequently used in combination with other drugs. There is a distinct tendency away from twilight sleep as well as the complete Gwathmey technic; a decrease in the use of morphine but an increase in the use of the barbiturates. The last-named drugs can be used earlier in labor than most others and this fact, in all probability, accounts for this increase in popularity. Significant also is the extensive use of this combination with rectal ether oil.

From the Department of Obstetrics, University of Maryland School of Medicine.

Another survey by C. Gould and B. C. Hirst, shows that the most widely used analgesic agents are the barbiturates of which pentobarbital-sodium is the most popular. It is undubitably recognized that the barbiturates cause restlessness and excitement, and according to the survey, this factor is most frequently controlled by the addition of rectal ether-oil. Second in favor is the combination of morphine and scopolamine while both avertin and the Gwathmey technic are found to be only occasionally employed. For use during the second stage and during delivery, it was found that nitrous oxide and oxygen are almost universally utilized although inhalation anesthesia is rarely used during the first stage of labor. Ether is used where relaxation is desired and in place of nitrous oxide in cardiac cases; ethylene only occasionally, and local, surprisingly and regrettably infrequently.

The barbiturates are the subject of much experimentation. These synthetic derivatives of urea are constantly appearing in new forms and chemists are striving to discover one which will combine the maximum therapeutic effect with a minimum toxic effect but such an ideal combination does not yet exist. These drugs are more powerful and somewhat more analgesic than chloral and, unlike chloral, produce no local irritation and have a wider margin of safety. Ordinary doses have little effect on blood pressure or pulse, however, fatal collapse has been reported in several cases from relatively small doses. Excretion is slow and thus continued administration may produce serious cumulative effects.

More has been written of sodium amytal than any other barbiturate and individual reports vary as to the degree of analgesia and amnesia derived from its use. It may be administered orally, rectally, hypodermically or intravenously. W. T. Pride gives six grains per rectum and when the effects begin to wear off, then morphine and scopolamine while D. F. Van Dell and others have given 15-20 grains by mouth. Intravenously it is given in doses of from seven to nine grains in a 10% solution to produce complete unconsciousness. H. B. Nelson performed a series of experiments with several analgesics and found this drug, combined with scopolamine, to be superior to all and, to support these findings, S. M. Dodek reports that it "seems to be the substance which has gratifyingly solved the problem of analgesia." Others are not so enthusiastic and stress the factor of restlessness as its outstanding disadvantage. Many have had narcotized babies while others are emphatic in their denial of this fact. Sodium amytal, it is claimed by some, overcomes a spastic cervix, this probably being due to the removal of fear and apprehension. Because of the restlessness produced by the drug, it is not recommended for use in the home.

As mentioned above, the tendency of pentobarbital sodium to supplant the other barbiturates is on the increase. Its action is similar to that of sodium amytal but it is said to cause less restlessness, less excitement and to be less cumulative in its action. It is usually administered by mouth in capsule form in doses varying from  $1\frac{1}{2}$  to 6 grains which may be repeated with relative safety, if necessary. It is most often used in conjunction with other analgesics such as paraldehyde, rectal ether-oil and morphine. C. E. Galloway and P. H. Smith found ideal analgesia in the combination of this drug with scopolamine and report excellent results although an increased incidence of outlet forceps resulted. This was due, they believe, to the patients' failure to cooperate at this stage because of the effects of the drugs. DeLee agrees with the above author that pentobarbital sodium is not applicable for home obstetrics. This also applies to those cases in which local anesthesia is used because the patients are unmanageable. It is also not used in cardiac cases because patients to whom pentobarbital is given become restless, and the increased muscular activity is harmful to the heart.

W. F. Abbott conducted a few experiments with its intravenous use and concluded that it is a midbrain sedative having little or no effect upon the cortical areas. It is said to reduce blood pressure and thus has been recommended in pre-eclampsia, however the probable effect upon renal and hepatic tissues must be more thoroughly ascertained before such a procedure is contemplated and thus, intravenously, it must be used with caution.

Our own experience with nembutal has been highly satisfactory. It works well alone and in combination with other analgesics such as paraldehyde, nitrous oxide and even local. De Lee differs, and states that he has found increased incidence of narcotized babies and postpartum hemorrhage. He frowns upon its combination with local and stresses the factor of restlessness as being one of its chief disadvantages.

What has been said of sodium amytal and pentobarbital can also be said of the other and less used barbiturates; however, mention must be made of evipal or evipan which has enjoyed a certain degree of popularity in Europe. Its actions, when administered orally, are similar to those of the other barbiturates but when given intravenously it produces complete unconsciousness for a period of 15 minutes and up according to the dose. The material use of this drug, we believe, can be said to be the product of over-enthusiasm and its use in obstetrics is largely confined to the episiotomy incision or its repair or at the extreme end of the second stage of labor. It is not useful in spontaneous deliveries for, during the period of its narcosis, pains are in

complete abeyance. Thus we see that it must necessarily be confined to conditions where an immediate sleep of short duration is desired. The consensus is that evipal can be a very useful but is, at the same time, a very dangerous drug. Some deaths have been recorded and the limited scope of its usefulness coupled with the high incidence of toxic effects, should restrict it substantially. Apparently, if there is any, even slight, pathological condition present in the patient, no matter what it is, it is best to leave evipal alone.

F. V. Emmert and S. Goldschmidt have introduced sigmodal, a new barbiturate, which is said to minimize that great drawback of all the barbiturates, restlessness, and to be without danger to mother or child. It shortens labor in most cases. Complete amnesia was obtained in 80% of the cases and, it is claimed by the above, the drug is not contra-indicated for use in the home by the general practitioner.

Scopolamine seems to be the key drug in obstetrics but is more often used in combination with other drugs. Its therapeutic properties include cerebral sedation, hypnosis and central respiratory depression. It is said to augment the amnesic and analgesic properties of other drugs as well as prolong their effects and thus we see it used often in combination with pentobarbital sodium, sodium amytal, morphine and rectal ether-oil. No untoward effect has been noted upon the uterus but the amount of excitation is often very pronounced and recently several cases of temporary, and rarely, of permanent insanity have been reported following its use in labor.

Morphine has enjoyed a long and continued use in obstetrics. It depresses the brain especially the higher functions thereof and there is a diminished sensibility to lasting impressions such as pain. At present, it is generally used in small, repeated doses to stop or inhibit uterine contractions, to give the patient a much-needed rest and to overcome a spastic cervix. It is most frequently given during the first stage of labor and most observers are firm in their belief that it should not be given within three hours of delivery as it exerts a profound effect upon the baby causing a narcosis and a consequent failure of inauguration of respiration. E. Shute and M. E. Davis found that infants born before one, or after six hours following its administration, manifested little, if any, narcotic effect. Morphine has been combined quite frequently with scopolamine in which form it has appeared to be most reliable in relieving dystocia and with 50% magnesium sulphate, which combination prolongs and intensifies its effect. Occasionally dilaudid, another opiate, is introduced as a substitute for morphine but there does not seem to be enough in its favor to supplant morphine.

Accompanying most deliveries, there is said to be varying degrees

of shock present and for such a condition, morphine given immediately postpartum has been found to be extremely valuable. An objection to this particular employment of the drug includes the fact that morphine has a tendency to relax the uterus and thus increase the tendency to postpartum hemorrhage.

Among the most popular rectal analgesics are avertin, ether-oil and paraldehyde. Avertin has attained a wide use as a basal anesthetic in surgery and here its untoward effects are well known. These toxic effects apply also to obstetrics but even to a greater extent because we must in addition consider the welfare of the infant. G. B. Morgan gives avertin at the time of full dilatation in the primigravidae and when the os is two-thirds dilated in the multiparae. While he claims it is harmless to the baby, others have found it to cause grave disturbances namely: asphyxia, poor nursing ability and increased aspiration of fluids. Generally, it must be complemented with some form of inhalation anesthesia.

Rectal ether-oil first appeared under the Gwathmey technic, and, although it has had a wide popularity, its use is decreasing. It is said to give the patient satisfactory relief from pain without interfering with the progress of labor and to be without any effect upon the baby. It also has the advantage of being administered earlier in labor than most methods in vogue at the present time. It supposedly gives good relaxation to the perineal and pelvic muscles. Recently Gwathmey et al. have reported ten years experience with this method and feel that today, it remains superior to all analgesics for labor. With this combination, there has been found a greater tendency to bleeding and its administration is complicated frequently by lower bowel irritation sometimes causing a mild inflammation to develop, and nausea and vomiting.

The use of paraldehyde in obstetrics is comparatively recent. It is generally administered rectally with olive oil as a vehicle and complemented with one of the barbiturates. We have recently employed this drug extensively in our clinic and as our method is, on the whole, quite similar to those of other clinics, it might be well to very briefly describe its technic.

The patient is prepared with pentobarbital sodium  $1\frac{1}{2}$  to 6 grains by mouth one-half hour prior to the administration of the paraldehyde. The lower bowel is cleansed with a soap suds or saline enema at this time. The paraldehyde in doses of 8–10 drachms with an equal quantity of olive oil, is given roughly at the time the patient desires it for her own comfort, i.e., at such times when her discomfort and pain are sufficient to warrant some relief. It is administered through a fairly

rigid enema tube which is injected well up into the rectum and above the presenting part. Labor is then allowed to proceed and no rectal examinations are performed for one hour unless deemed absolutely necessary. At the time of delivery, a small amount of inhalation anesthesia is used. The drug may be given as early in labor as desired if the cervical os has begun to dilate.

It is also given orally with perfect safety in five drachm doses in combination with some vehicle to provide volume and to mask the taste as much as possible. We have propylene glycol with syrup of acacia or aromatic elixir given alone, to fulfill these requirements. Here the drug's action is the same but with an added advantage of more rapid effect. Very seldom, unless nauseated before, does the patient vomit and no untoward gastric effects have ever been noted.

Our experience with paraldehyde has been one of almost continued success, our incidence of complete failures almost negligible, and the patients themselves are well pleased. The loss of memory, lack of pain consciousness without any appreciable slowing of labor and the absence of ill effects upon the baby—all are factors which have made us quite enthusiastic. H. H. Rosenfield and R. B. Davidoff, using the rectal method, found the average duration of labor under paraldehyde in the primigravida to be 9 hours, 45 minutes and multigravida 5 hours, 45 minutes. They also found the duration of amnesia and analgesia in the former, 8 hours, 45 minutes, and in the latter, 5 hours. After labor, the duration of amnesia averaged 7 hours, 30 minutes. They found only a moderate degree of restlessness in their series of 300 cases and of this total, seven babies were stillborn of unknown cause and eleven required only mild resuscitation. It has also been found—and this, too, has been our experience—that little effect may be obtained from paraldehyde unless combined with barbiturates. Recently, combinations of paraldehyde and morphine have been found by others to be quite satisfactory. Kane has combined the drug with benzyl alcohol to anesthetize the rectal mucosa to increase its absorption. He too found no memory of suffering and a long post-partum amnesia almost always occurred.

Local anesthesia in obstetrics is coming into a wider use and bids fair to rival general anesthesia especially in the field of operative obstetrics. The spinal anesthetic with procaine has been used for some time with varying results and it has become popular enough in surgery for one to judge it adequately. But in obstetrics, favorable results have not been entirely present although Cosgrove reports almost invariable success. The mortality has been higher in cesarean section

than in abdominal work on nonpregnant individuals because, it is claimed during uterine contractions the anesthetic is in danger of being forced up the spinal canal into the medulla causing respiratory paralysis and death. M. F. Eades, judging its results in obstetrical abdominal work, presents 5% failures and 7% cases in which supplementary anesthesia was necessary. The spinal anesthetic is also given to patients delivering through the birth canal and here again its success has varied greatly and, according to current opinion, there seems to be no advantage of the spinal, over the local, anesthetic but several disadvantages which latter include all those encountered in general surgery. R. Fournier reports a case in which, following a spinal anesthetic for cesarean section, a patient developed generalized clonic convulsions followed by a period of coma. In commenting on this case, we quote De Lee: "Again the danger of the spinal anesthetic in obstetrics is shown. Why is this? First, during labor the changes in blood pressure are marked. Second, the changes in intraspinal pressure are rapid and profound. . . . Third, the curves of the spinal column may make it hard to inject the anesthetic solution. Fourth, emptying the abdomen changes the pressure and currents of the spinal fluid. Fifth, the drop in blood pressure when the uterus is emptied may coincide with the drop resulting from the mode of anesthetic and this is particularly dangerous if there is hemorrhage. Moral: No spinal in obstetrics."

Infiltration anesthesia is rapidly being accepted as a substitute for other methods. For delivery through the birth canal we have the paravertebral block, the pudendal block and local infiltration. The paravertebral block will abolish the pain of uterine contractions without affecting the tone. It also obviates the pain associated with the dilatation of the birth canal. Sufficient relaxation of the uterus is obtained to enable the performance of versions, manual rotations and breech extractions and it is especially advantageous for episiotomies, perineorrhaphies and Dührssen's incisions. Traction and forceps pain is obliterated and it has the great advantage of enabling the utilization of the mother's auxiliary powers. It is needless to say that the administration of such an anesthetic necessitates a practiced hand.

The pudendal block consists in blocking the nerve trunks as they approach the perineum. Its advantage lies in the anesthetization of the perineal tissues and the lower third of the vagina for the performance of episiotomies, perineorrhaphies and outlet forceps extractions. Advantages over general anesthesia as outlined above may also apply here.

Local infiltration anesthesia also has the above-named advantages with few exceptions. It is recommended even where no episiotomy or perineorrhaphy is performed because it relaxes the perineum and thus decreases the incidence of tears. The following advantages of local infiltration are outlined by Greenhill:

1. There is practically no mortality.
2. There are no pulmonary complications.
3. There are no local complications.
4. The technic is simple.
5. There is no bad effect on vital organs.
6. There is a reduction in bleeding.
7. No asphyxia of the baby is present.
8. There is no interference with the uterus.
9. Tissues must be handled gently.
10. There is less wound infection because trauma is decreased and general resistance is not lowered.

No great mention need be made of inhalation anesthesia as its use has diminished only in proportion to the wider use of other methods. It is used as a complement to these methods in many cases and as a supplement when they fail. The most popular are nitrous oxide and oxygen, ethylene, and ether. The advantages and disadvantages are the same as those in surgery except that added danger to the baby may be present and it must be remembered that anoxemia affects the baby first. Ether relaxes the uterus and increases the tendency to postpartum hemorrhage but, on the other hand, it is claimed to stimulate inauguration of respiration of the newborn.

It may be concluded that the goal of painless childbirth has advanced within the past five years and that most outstanding is the introduction of paraldehyde, the increased popularity of the barbiturates and the more widespread use of local anesthesia. Complete cessation of pain is accompanied by complete lack of uterine contractions with the present known drugs but loss of memory of pain without appreciable slowing of labor can be obtained. As yet the early pain of labor cannot be obliterated without stopping contractions and the present armamentarium does not include any substance that will effect a completely painless labor and delivery without affecting labor, the mother or the baby in some undesirable manner.

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# HEMATOGENOUS PULMONARY AMEBIC ABSCESS

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The purpose of this paper is to present a case which is believed to fall in the category suggested by the title along with a brief review and discussion of the literature on the subject of the pulmonary complications of amebiasis. It is only of recent date that the importance of this subject has been fully realized. To Craig must go most of the credit for making us "ameba conscious," as it was through his work that we came to realize that amebic infections are not limited to the tropics and subtropics, but that amebae are ubiquitous. Craig (1) states that 10 per cent of the people of this country are infected by *Endameba histolytica*, and the reason we overlook this fact is because of the lack of clinical manifestations.

## CASE REPORT

A white man, age 45 years, was admitted to the University Hospital, May 28, 1934 and discharged, July 5, 1934.

*Chief Complaint:* Severe pain in right chest.

*Family History:* Negative.

*Past History:* Usual childhood diseases. Influenza in 1918. The patient's occupation is that of a tallyman on the docks. Until 9 years ago he worked on ships plying the East Indian ports. Even now he mingles with the East Indian native seamen during work. For the past few years he has had, on occasion, slight diarrhea which lasts a few days and then clears up without special treatment.

*Present Illness:* On May 25, while walking on the street, he was suddenly seized with a sharp pain in the right side of his chest. This pain was greatly increased in severity on inspiration. He also experienced great shortness of breath. The following day the pain had ameliorated but fever, cough, bloody expectoration and considerable dyspnoea had appeared. He consulted his family physician, who made a diagnosis of "pleurisy with effusion" and sent him to the hospital.

*Systems: Respiratory:* The patient has had no cough, no hemoptysis, fever, chills, or night sweats except as noted above in the present illness.

*Gastro-intestinal:* Except for the history of diarrhea, the gastro-intestinal history is negative.

*Cardio-vascular:* Negative.

*Special Senses:* Negative.

*Physical Examination:* May 30, 1934. The patient is a well developed and well nourished white man. The temperature ranged from 98° to 103°F., pulse rate was 110 per minute; respirations, 35.

*Head and Neck:* Negative.

*Chest:* The respirations are rapid and a little shallow. There is a definite lag in the movements of the right side of the chest. On the right side, the breath sounds are distant from the angle of the scapula down to the base posteriorly, and

the percussion note is definitely impaired. No areas of consolidation can be made out. No râles are heard. The left side of the chest is clear.

*Heart:* Negative.

*Abdomen:* The liver and spleen are not palpable or tender.

*Extremities:* Negative.

The patient expectorates a muco-purulent sputum which is intimately mixed with blood. There is no odor to the sputum.

*Impression:* An acute pulmonary infection which is probably a walled-off empyema. We suspect that the patient has a chronic amebic enteritis. There is nothing to indicate a liver abscess, but the sputum makes one suspicious of a suppurative process, which has ruptured through the diaphragm, and is due to an amebic infection.

*Laboratory and Special Findings:* May 28, 1934: Blood picture—White Blood Cells, 20,000; Red Blood Cells, 3,890,000; Hemoglobin, 50%.

*Differential Count:*

Polynuclear neutrophiles . . . . .	88%
Eosinophiles . . . . .	4%
Small lymphocytes . . . . .	6%
Transitionals . . . . .	2%

*Urine:* Negative.

*Stools:* May 29, 1934: Negative for blood, cysts, amebae and parasites.

*Sputum:* Negative for acid-fast organisms, amebae and amebic cysts.

*X-ray:* The roentgen examination of the chest shows a localized area of increased density in the lower posterior portion of the right side of the thorax which may be due to encapsulated fluid.

*Thoracentesis:* May 31, 1934: A needle was inserted into the pleural cavity in the 8th interspace just inside the angle of the scapula on the right side and 20 c.c. of a material which looked like "anchovy sauce," were obtained. This material looked like the patient's sputum. Methylene blue was injected into the pleural cavity but was not expectorated. Amebic cysts were present in the pus aspirated from the pleural cavity.

*Proctoscopic:* June 2, 1934: The rectal mucous membrane is the site of a definite inflammatory process. There is present a fair quantity of muco-pus. The mucosa is generally reddened, spongy, and easily traumatized. No ulcers are seen, but the appearance is extremely suggestive of amebic infection.

*X-ray:* There is diffuse clouding at the base of the chest on the right side, also evidence of air and fluid posteriorly about 3 inches from the spine under the angle of the scapula. The right side of the diaphragm is slightly elevated and its movements are limited.

*Course in Hospital:* From the time of admission until June 4th the patient ran a fever ranging from 98° to 103°F.; the pulse rate was 110 per minute; the respirations 35. Expectoration was copious and cough continuous. Because of the character of the sputum, the history of a chronic intermittent diarrhea and the finding of amebic cysts in the material aspirated from the chest, the following therapy was carried out.

1. Emetine hydrochloride was given hypodermically in gr. 1 doses daily for 9 days.
2. Stovarsol, grs. IV b.d. for 10 days.
3. Chiniofon, grs. IV t.i.d. for 7 days.

4. Daily enemas of chiniofon (200 c.c. of a 2% solution each night and each morning high colonic irrigations of a 1-5,000 solution of potassium permanganate).

5. After allowing a week's rest, courses of stovarsol and chiniofon were again given in the same manner as above.

*Operative Note:* Under novocaine anesthesia thoracotomy with rib resection was done on June 4, 1934. The parietal pleura was opened and a finger introduced into a large abscess cavity which was fixed. There was no suction of air through the wound and no collapse of the lung. The wall of the abscess was soft and was in the lung. Drainage was established by a Brewer-tube.

*Pathologists Report:* Material from the abscess was sent to the department of pathology. Active amebae were demonstrated in this material. No liver cells were identifiable. There were many polynuclear neutrophiles and eosinophiles.

From June 4, 1934 to June 14, 1934, the temperature dropped slowly, ranging from 98° to 100°F. On June 14 it became normal and remained so. Cough and expectoration cleared up.

Roentgenogram on July 2, 1934 showed a decided improvement in the appearance of the right side of the chest. There was a little infiltration in the right upper lobe, along with a moderate clouding at the right base suggesting a thickened pleura.

*Blood Picture:* White blood cells, 13,200; red blood cells, 4,560,000; hemoglobin 54%.

*Differential Count:*

Polynuclear neutrophiles.....	67%
Eosinophiles.....	4%
Small lymphocytes.....	25%
Large mononuclears.....	4%

*Final Note by Dr. Harry M. Stein on July 5, 1934:* The patient entered the hospital quite ill with pulmonary symptoms and a final diagnosis of amebic abscess of the lung was made. We were unable at any time to demonstrate any trouble in the liver. As far as we could determine, the patient did not have a liver abscess, but had a metastatic amebic abscess of the lung. It is true that we cannot be absolutely sure of this, but it is certain that the patient did not have any signs of an abscess of the liver. He was discharged from the hospital as cured.

Since the patient has returned home his condition has improved steadily and at the end of 6 weeks he was entirely free of his former symptoms and had gained 16 pounds in weight.

#### DISCUSSION

Craig (1), in speaking of the complications of amebiasis, states: "Next to the liver, the lung is the most frequent site of amebic abscess." The abscess may originate in the lung or may follow rupture of an hepatic abscess into the lung. According to Strong (2), Bunting was able to trace emboli containing amebae from a thrombus in the hepatic vein which also contained amebae. This embolus of the pulmonary arteries apparently resulted in an amebic abscess of the lung. He further states that in his experience a primary abscess of the lung rarely, if ever occurs, and this is borne out by the experience of other authorities. The majority of such abscesses follow rupture of an amebic

abscess of the liver into the lung or pleural space. The term "primary amebic abscess of the lung" has been used erroneously in the past by a number of authors who meant to convey the idea of pulmonary involvement independent of hepatic involvement, and in most all of these cases there was present either an active dysentery or a history of past infection. French authors, especially, have written considerably on the pulmonary complications of amebiasis and have reported a number of cases of bronchial amebiasis, secondary amebic abscesses of the lung, and primary amebic abscesses of the lung. In most of their cases they have been able to demonstrate the amebae in the sputum and often in the scrapings from the walls of the abscess, but in a number of cases they have based the diagnosis solely on the fact that the condition responded to emetine therapy. But this, in my opinion, would not bear close scrutiny as all of us are familiar with cases of non-specific pulmonic abscess which have cleared up with no therapy other than rest in bed and postural drainage. It is thought today that an amebic abscess primary in the lung, with no amebic infection elsewhere in the body i.e., bowel, liver, etc., is an extreme rarity and many contend that it does not occur at all in spite of the reports of Panayatalou and Netter (3), Petzetakis (4), etc. Petzetakis (4), who has written a great deal on the subject, reports a case which has many points in common with that reported above. In this case the active amebae were found in the scrapings from the wall of the abscess. The case resembles similar cases reported in that the history of a dysentery is either quite remote or entirely absent. He emphasizes the following points:

1. Amebiasis—long period of a septic state, typhoid-like for many months without any one localization.
2. The complete absence of dysentery before or after.
3. The rapid development of the abscess (amebic emboli).
4. The insufficiency of operative treatment.
5. The rapid influence of emetine upon the septic state and the recovery from the illness after this treatment.

Further cases have been reported by Grasset and Fourquier who studied seven cases of pulmonary amebiasis in chronic dysenteries all of which had amebae demonstrated in the sputum. Likewise, cases have been reported by Pelle (5), Le Baron (6), Kourilsky, Yaloussis (7), Moreau et Celice (8), Tannou (5), Labbe (9), etc.

#### INCIDENCE

Since the occurrence of the pleuropulmonary complications of amebiasis are in most instances dependent upon the coexistence of an

hepatic abscess, it is therefore important that one should have some knowledge of the incidence of these two complications of amebic dysentery. In a recent paper on this subject, Ochsner and De Bakey (10) were able to collect 4,392 fatal cases of amebiasis of which 27.9 per cent (1,664 cases) were complicated by hepatic suppuration. They further state that in a large series of reported amebic hepatic abscesses (2,490 cases), the incidence of pleural and pulmonary complications was 15.8 per cent. In their own series the incidence of pleuropulmonary complications was about the same (95 consecutive cases with amebic hepatic abscess and 15 with pleuropulmonary complications, or an incidence of 15.7 per cent).

#### ETIOLOGY AND PATHOGENESIS

The fact that amebic abscess of the brain does occur and is sufficiently well recognized serves to prove that amebemia must exist and that this occurrence of the amebae in the blood stream serves well to account for the occurrence of amebic emboli to the lungs. In this connection Petzetakis states: "Most authors consider the hepatic system necessary to explain an amebic metastasis. However, in a great number of observations the liver does not seem to participate. On the contrary, the passage of the amebae is easily understood when one considers the numerous anastomoses which exist between the superior hemorrhoidal veins, and certain veins in the wall of the the intestine (branches of the portal vein) with the branches of the vena cava and also the direct or indirect anastomoses which exist between certain colic veins and the renal veins."

Of course it is well recognized that the majority of pleuropulmonary complications occur as a result of direct extension from an amebic hepatic suppurative process. However, it is also thought that extension may occur by way of the lymphatics without perforation of the diaphragm.

#### PATHOLOGY

The manner in which the lung or the pleura may become involved depends on the factors named above and as a result we see several different conditions arising. Ochsner and De Bakey have classified the different types as follows:

1. Hematogenous pulmonary abscess without liver involvement.
2. Hematogenous pulmonary abscess and independent liver abscess.
3. Pulmonary abscess extending from a liver abscess.
4. Bronchohepatic fistula with little pulmonary involvement. Here the liver abscess ruptures directly into a large bronchus and drainage is established with little or no parenchymal involvement of the lung.

5. Empyema extending from a liver abscess. This results where the process is acute and sufficient time has not elapsed for the formation of adhesions between the lung and the diaphragm, consequently the abscessed liver ruptures into the pleural space and not into the lung or bronchi.

The contents of the abscess vary according to whether there is secondary bacterial invasion or not; if uncomplicated by secondary invaders, the contents resembled those of an amebic abscess of the liver (anchovy sauce), while if secondary invaders are present, the contents vary in color from yellow to brownish or greenish-yellow.

The occurrence of amebae in the contents of the abscess is rare, but in the present case they were demonstrated on several occasions in the material obtained at thoracentesis and at operation. Just as in hepatic abscess it is rare to find the amebae in the pus, they are often found in the scrapings of the wall, and the same holds true in the case of abscess in the lung. The amebae also may be demonstrated in the sputum which, of course, has the same characteristics as the contents of the abscess cavity.

In the case of blood-stream metastasis, any lobe may be involved but the right lower lobe is the one most frequently selected as the site of the abscess.

#### DIFFERENTIAL DIAGNOSIS

Pulmonary amebiasis has been confused with a great many other conditions, notably tuberculosis, non-specific abscess of the lung, bronchiectasis, chronic bronchitis, pleurisy with effusion, empyema, and even typhoid fever and malaria. Because of the frequent occurrence of hemoptysis and the productive cough, the cachexia and fever, it has been more often diagnosed as pulmonary tuberculosis. The diagnosis is based on the following facts:

1. History. The presence of an active dysentery or the history of a remote dysentery, treated or untreated, gives us a definite clue. In some instances, however, cases have been reported in which no history of dysentery could be obtained and this is not at all surprising when one considers the number of individuals infected with the ameba and who have no symptoms.

2. Sputum. The characteristic "anchovy" color is unmistakable when present. Microscopic examination of stained and fresh preparations often reveal the presence of amebae and necrotic pulmonic tissue. In case the abscess is secondary to a liver abscess one may find liver cells in various stages of degeneration.

3. Cough. Cough is almost invariably present and is of a very harassing nature, productive of greater quantities of sputum than non-specific abscesses or tuberculosis, and as stated above is often accompanied by hemoptyses.

4. The physical findings are the same as those of any other lung abscess and consequently are of little value in the differential diagnosis.

5. Proctoscopic. Proctoscopic examination will frequently reveal amebic ulcerations of the large bowel and thus help in establishing the diagnosis.

6. X-ray. It is because of the X-ray findings that most of the cases of amebic bronchitis have been confused with pulmonary tuberculosis. However, in the case of amebic abscess the two should not be confused, but, the abscess cannot be differentiated from any other abscess.

#### TREATMENT

Many different methods and therapeutic agents have been tried in the treatment of this condition, notably: Thoractomy, pneumothrax, aspiration, emetine, stovarsol, etc.

The consensus seems to be that aspiration either by thoracentesis or thoracotomy plus regular courses of emetine presents the best possible means of effecting a cure.

Craig feels that the probability of cure with emetine alone is very poor, but the prognosis as regards the disappearance of symptoms is excellent. In Petzetakis case the amebae persisted in the sputum after the patient had become symptomatically better, and cleared up only after repeated courses of emetine administered over a period of several months.

#### PROGNOSIS

The prognosis in the type of infection represented by the above reported case is excellent. In the series collected by Ochsner there were 22 such cases of hematogenous amebic pulmonary abscesses with only 1 death, or a mortality rate of 4.5 per cent. The 1 death was in a patient who was not given emetine. The prognosis in the other 4 types is almost equally as good if diagnosed early and if aspiration and emetine are employed immediately. Open drainage should not be employed unless there is secondary infection. This is well shown by Ochsner's figures, for in those cases in which emetine alone was used the mortality rate was only 5.4 per cent, whereas in those in which operation and emetine both were used, the mortality was 16.6 per cent.

#### SUMMARY

1. A case of amebic abscess of the lung has been observed in which the amebae were demonstrated and which, taking all things into consideration, we feel justified in assuming was an hematogenous pulmonary amebic abscess.

2. A careful history of dysentery, however remote, treated or untreated, is very helpful in leading one to suspect pulmonary amebiasis in obscure pulmonary conditions.



3. Drainage by aspiration or thoracotomy, aspiration being the procedure of choice, plus intensive treatment with emetine give the best prospects for cure of amebic abscess of the lung.

4. Hematogenous amebic abscess of the lung is a rare condition but as stated by Craig, Petzetakis, and others: "It is possible that many of these cases go unrecognized and that the real incidence of the condition is much greater than is at present supposed." We should learn to look for it as we have learned to suspect amebic hepatitis.

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## A HAPPY BALANCE IN ALL THINGS

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The maturation of the good physician is exceedingly slow. Tonight we are gathered here in honor of the completion of an important phase of this slow process by you the members of the class of 1937 of the University of Maryland. But since these are known as commencement exercises it is plain that we are here quite as much to celebrate your entrance into a new stage of your evolution. In the address which it is my honor to deliver it has seemed appropriate therefore not only to look backward over your accomplishments in the past but to venture also into a discussion of the future that lies before you. In doing this last I have no wish to do more than to speak in homely language as one traveller some stages ahead of others advancing on the same road might send word back to them as to what he has experienced and what obstacles he has encountered and what suggestions he can make to those who follow him. Moreover I would have you believe that as one of the Faculty of the Alma Mater that has housed you for four years, I speak with some parental feeling to you, who are assembled in our doorway ready to depart.

In assessing your training up to this moment I would have you think of it in terms of two disciplines to which you have been subjected: the intellectual and the moral. In the training of your mental faculties you and your teachers have labored together since the day when each of you went off with a pat on the shoulder from your mother to face the first day in school. Grade school, high school, college and medical school; you have literally survived them all. Each of you has seen multitudes of classmates fall out along the road through mental incapacity, through lack of working power, through lack of ambition. You have seen others diverge at some point from your path to enter other careers. But you have persisted and you may honestly congratulate yourselves that you are select men, that you have proved yourselves high above the average in scholastic ability.

Yet though you have all this real accomplishment to your credit there are sure to be among you wide variations in the value for future growth of the trainings you have received. In some the acquisition of the mass of information necessary for the passing of examinations will

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have been achieved chiefly through the use of a retentive memory and most of what has been learned has neither been thought about further, nor criticized, sorted, compared, or ranged in working order—it has in other words been ingested but not yet digested and assimilated. There is a limit to memory as there is to appetite. The overcrammed student may leave school with a long lasting nausea at the thought of further study. Lucky is the man who has learned in these years how to think as well as how to memorize for he will already have assimilated most of the raw facts he has encountered and will go out with unjaded curiosity to learn more from his future experiences.

Then there are certain to be among you those who are still too bound by the voice of authority and by the printed word and who have not yet learned to depend sufficiently upon their own observations. They criticize what they see in the patient by what they have read in the book—instead of amplifying their book and lecture knowledge by what they themselves have seen in the patient. To depend on the book alone is stultifying. To depend on one's observations alone is arrogance. But to learn how and when to credit one's own experience and so to build up one's own knowledge from both study and observation is the method of growth.

There must be great variations among you also as to the breadth of the cultural backgrounds in which your special knowledge of medical science and art is set. All of you will have made some study of general science, of history, of literature, of the arts. Those to whom these experiences have been fruitful are equipped with a broader vision and a deeper understanding of the times in which they live and the fellowmen they must live with. Such interests should never be allowed to die even in the press of the busiest medical lives. They are correctives and sedatives and we need them most when our lives are most hectic. They are like a glimpse of the stars to the tired physician coming out late from the crowded hospital into the quiet of the night. They help to hold in proper perspective our problems and our disappointments.

Earlier I spoke of a second form of discipline to which you had all been subjected, a moral discipline. By this I meant merely to recall to you that your training for your profession was by no means confined to intellectual fields. The formation and training of your characters during your lives so far is an even more important part of your preparation for your lives as physicians than your acquisition of knowledge, of methods of thought, of powers of observation and of breadth of view.

This development of character has no place in the curricula of the higher schools. We owe it to some extent to our racial forebears, greatly to our parents and the homes in which we grew up, and considerably to all the environmental factors of our later lives. But though these external factors have a large part in making us what we are I am of those who believe that our own will and determination in following our code eventually have even a larger part.

Character is not easily read, though certain characteristics may shine through in some men plainly enough. On the whole, character can only be judged when it has been tested by events. We are secrets to each other until we have lived close together, worked and played, met success and failure, temptation and danger together.

No such searching tests can be applied in selecting men for admission to the medical school but insofar as it was possible you were selected on admission for character as well as for scholastic attainments and for four years you have met the test of character imposed by a difficult and exacting schedule, sufficiently well to be here tonight. In willingness to sacrifice pleasure to duty, in dependability, in determination, you have shown yourselves the superiors of average men. These are major achievements.

How well each one of you will meet the further tests of character imposed by a physician's life, only time can tell. Of this however we may be sure. You will be tried in the fire. You will need all the pride you can summon in your honesty, in your courage, in your loyalty to the ideals of the profession. Cultivate that kind of pride, the pride that scorns to stoop, for your success depends upon it. When I say success I mean in part worldly success, for people are drawn to physicians by confidence in the man as much as by his reputed attainments; but I mean even more that truer definition of success, the attainment of happiness.

As to your past training then each one of you may rightly feel a warm satisfaction in what you have achieved. You have submitted yourselves to many years of intellectual and moral discipline and you have successfully passed to a stage that no average men could attain. The tests however have not been and cannot be searching enough in these years to determine which of you is destined to continued intellectual growth nor which of you will reach the finest development in character. Such as you are now you will go forth to face problems which as yet you have not encountered.

With the nature of some of these problems I wish next to deal. During the coming few years you will all have to face the difficult question as to whether you wish to specialize in some field of medicine or to enter into general practice. It is a question to the decision of

which you should devote your coolest and most careful thought. You should reassess carefully your own capacities and interests, your opportunities as to appointments, your resources for the further period of training, the influence upon you and others of the possibly inevitable deferring of marriage and homemaking. You should recall that there is vast overcrowding in almost all special fields of medicine. Perhaps most seriously of all you should question yourself as to whether you are of the type of mind that will remain interested for life in the field you have chosen—for only if you retain such an interest will you escape stereotyped and routine practice that will make of you more of a medical technician than of a physician.

As you know, the medical profession has recently set up its own standards as to what the general character of the training for specialization shall be. You will, I feel, do well to study carefully the announcements that are made as to these requirements. They will serve as a guide to you in making your own plans. They bear no legal authority, nor will they be rigid enough to prevent your following a special opportunity for work or study in which you have an interest. I feel however that to ignore them is folly. They have arisen primarily from a realization on the part of the profession that there has been vast abuse of the public by half trained men inviting special confidence in themselves by assuming the title of specialists. The profession is determined to give to the public some tangible evidence of whether adequate study and training have preceded the use of this title. This it will do through its certifying boards. If you decide to specialize it is surely wisest to prepare yourself according to the highest standards and not attempt to win success handicapped from the start by dubious training.

You are faced also by the fact that you are entering this ancient profession at one of the critical periods in its long history.

We should recall always that the physician's position in the community has suffered in the past many ups and downs. The practice of medicine has been elevated at times to a priesthood and it has fallen sometimes largely into the hands of witch doctors, alchemists and barber surgeons. Of course even in the times when it was least considered medicine has always produced a few great men who won their place among the famous of their day. Now, perhaps never at any time in history has the medical profession occupied a more honored position in the community than in our own day and generation. It has won this fairly by the tremendous and easily measurable contributions it has made in the last fifty years to the safety, and the level of health of the people; and it has won it equally by its unexampled generosity in the maintenance of its fine tradition of free service to the indigent.

This very confidence that the profession has won and these very gifts that it has made to the people are now the source of the most puzzling problem that confronts us.

The first great difficulty that confronts the medical profession may be stated as follows: How is the medical profession to retain its position as the leading and guiding influence in the health program of the nation?

Let me give you my own interpretation of the trend of events that have led to making this question an urgent one.

As recently as 75 years ago adequate medical care in terms of the then available knowledge was provided by the physician from his handbag, in office or home. There were very few hospitals, aside from pest houses and no laboratories except in a few schools. As the growth of medical knowledge began to require more elaborate facilities for the application of new discoveries to the cure of disease we may consider that the medical profession could have met the situation in two ways. It might have found funds to have provided its own facilities by joint ownership and so kept the direction of such facilities entirely in its own hands, or it might have sought aid from public spirited individuals or from the State. As a matter of fact it has done something in both directions. The Mayo Clinic and certain other clinics are shining examples of what can be accomplished by physicians in the way of providing their own facilities without philanthropic or state aid. But such executive ability as enabled the Mayos to combine active and brilliant surgery with direction of the growth of their clinic is naturally extremely rare. Numerous small private hospitals, group clinics, private sanatoria, and elaborately equipped offices did spring up as the result of individual efforts of physicians to meet the new demands. Only a few have been notably successful and on the whole the individual efforts of the profession have resulted in relatively insignificant results.

A vast increase in the number of hospitals in this country has occurred in the last fifty years. From a few hundred at the beginning of that period their number has grown to over 7,000. Lay philanthropic organizations of the non-profit type (church, non-sectarian, fraternal, etc.) have provided about one-fourth of the total hospital beds, mostly in institutions founded in the first half of the period mentioned. Federal, State and local government have provided over one-half of the total beds, mostly in the last 25 years. The remainder of less than a fourth in bed content are owned some by business corporations and some by physicians.

The growth of out-patient clinics, health centers, group clinics and pay clinics has been even more remarkable. As late as 1910 there were

only 600 of these in the United States, in 1926 there were 6,000 and there has been a rapid increase since. Of these less than 300 are owned and operated by physicians.

It is not possible to estimate how large a proportion of the total sick at any one time are being cared for in the home and in private physicians' offices and how large a percentage in the above named institutions, but it is evident that there is a very tremendous increase going on in the proportion who receive hospital or outpatient care.

A very considerable percent of the physicians' work therefore is nowadays carried on in institutions in which he has no ownership. That such a development was inevitable can readily be grasped when we consider that it is estimated that the capital outlay in such institutions in the United States represents over 3 billions of dollars. However at the beginning of this era of developing institutions physicians led in the movements to found them, and their administration was largely in the hands of physicians. Physicians still wield a considerable influence but more and more the lay boards, the trained hospital executives, the public health officials, the Boards of Welfare, the social service organizations and others are coming to dominate the policy and conduct the administration of these institutions. These institutions were founded to provide physicians with better facilities for the care of the sick. There is a tendency now for the institution to look upon its professional staff as a part of its equipment for caring for the sick.

Again, this development of lay, governmental and trained executive administration of hospitals was inevitable. The practising physician cannot be expected to develop this special executive ability, nor has he time to exert it. But I believe strongly that unless he retains an important voice both in general policy and in administrative detail as it affects his professional work, the public benefit of these institutions will be greatly diminished. The doctor retains the point of view that the patients' welfare is the true objective. The lay board and the hospital executive may look only at the immediate problem of efficient business administration.

How can the doctor retain his influence. Only through a willingness to give time and study to the institution in which he serves. This is one of the demands upon you for free service. To work on the staff committees of your hospital and outpatient department. To help hold the important place of the medical profession in the direction of medical institutions.

Organized medical effort however extends today far beyond the confines of hospitals and outpatient clinics. Highly organized federal, state and city health departments exist which are responsible for sani-

tation and the control of contagious disease. Here again the profession works no longer as independent individuals but perforce under the direction of a body created by the government—employing medical men or requesting their cooperation so that through such team work ends may be accomplished which could not be attained by individual action. It is natural that leadership in campaigns against certain preventable diseases should fall to the trained personnel of the public health departments. We are seeing a magnificent example of it now in the Surgeon General's appeal to the profession and to the public to reduce the toll taken by syphilis in this nation. There are many such campaigns in progress—against tuberculosis, against cancer, puerperal infection, blindness, etc.

Medical scientists have made the discoveries which underlie these campaigns, and scientific practitioners have demonstrated the applicability of these discoveries but in the organizations, lay and state, that are campaigning to dispense these benefits the practising physician is often looked upon only for professional service and not for direction of policy. Yet there often arise in these campaigns difficult questions directly affecting the whole economic problem of medical care for the community, in which the voice of the medical profession should be heard. How can you make yourselves heard. Only through your medical societies whose committees must give hours taken from practice, to the study of these problems so that the profession as a whole may be considered in the making of such plans. You will be called on in your turn to carry on these labors.

I will not pursue this line of thought further. It may be summarized by stating that with the tremendous development of institutional and extramural organizations for applying medical knowledge to the care of disease and to its prevention the medical man has ceased forever to be sole arbiter in the health of the people. Moreover he is in real danger of losing all direction over the policies under which he must carry on his work. Such a loss of influence would be lamentable not merely because of the loss of prestige but chiefly because the physician, knowing intimately both disease and patients as well as patients' home conditions will always be a necessary guide to all sane and efficient health measures. At the same time the burden of taking part in the administration of hospitals, clinics and health campaigns is a heavy one for the practising physician. How to find men from our ranks who can and will effectively represent us in these matters is one of the serious problems of the profession today.

I have discussed how our own discoveries have entailed complex organizations over which we have largely lost control. I wish now to



point out some of the difficulties that have arisen as a result of our treasured tradition of free service to the indigent.

Why, I might first ask, do we treasure this tradition so highly? Why are we so loathe to consider any plan which would entail its loss? It is I am certain because it embodies that spiritual aspect of our work that raises it high above labor performed only for hire: because this free giving of our skill to those in need ennobles the many personal services we give which might otherwise seem sordid and mean to men of pride. Should the day come when we take pay for all we do I fear lest the quality of those entering the profession will deteriorate.

The immediate danger however is rather—how shall we get adequately performed the enormous amount of free work which we are called upon to do—for if we fail to get it adequately done will not the public demand salaried physicians to do it and will we not then be in for an era of state medicine with all the abuses, inefficiency, heartlessness and wastage which such an enormous bureaucracy could so readily entail?

There are always in the community three classes of people who are unable to pay the physician for his medical services; those who are indigent and unemployable because of physical or mental defects, those who are indigent and unemployed because there is no work or because they will not work, and finally those who are not indigent but have not sufficient income to pay a physician, i.e. they are medically indigent. Provisions are made for the subsistence of the indigent from public funds; provisions are made for hospital beds, board, drugs, nursing and social service for the indigent, from public funds and private contributions; provisions are made for outpatient buildings and equipment for ambulant sick indigents from public and private funds; provisions are made for some home nursing for indigents from public and private funds. To these funds for these purposes physicians contribute like any other taxpayers and generous citizens. When it comes to the medical care of the indigent in these hospitals, these outpatient clinics, in doctors' offices and in their homes, public funds and private contributions dwindle to a mere trickle and the medical profession assumes practically the entire burden without financial recompense. Moreover they are requested to report on their findings so they must make further sacrifices of time to fill out forms certifying that John Doe is disabled so he should receive relief funds or his children a pension—and next month that he is still disabled, etc. When we consider what the permanent relief load is and what heights it may reach in a depression, and further how large a number of medically indigent there are, and further how considerable a marginal group

declare themselves unable to pay it is not surprising that the problem of furnishing adequate medical service free, to this large segment of the population, is one which at present is staggering the medical profession. It seems improbable that the present situation can continue for many years unchanged without a serious breakdown in service. Let us remember however that there are many solutions possible other than a completely government controlled medical service for the indigent. Let us be sure that in the ultimate program not only a fairer division of the burden is effected but that also there is due consideration given to that part of the problem which is not material but of the spirit. A program which would encourage medical pauperism is as unAmerican as some of our present pauperizing relief projects. A program which would eliminate the finest medical tradition would do much to debase the medical profession. The problem is urgent, it is complex but it is surely not insoluble. It will I predict be partially solved in many ways, but you and many physicians after you will be searching still for the perfect answer.

\* \* \* \*

Now what counsel can an elder traveller in the paths of medicine, after sketching these rocky stretches and these morasses which beset the way, give to you who are starting full of youth and enthusiasm on the same journey.

I hold that for the physician the master word is balance.

The well balanced man in my meaning is one who is affected in normal human fashion by both extremes, who weighs them both and takes that stand which seems nearest to the truth. He is a thoughtful man since he must judge and weigh. He is a man of feeling since he must be sensitive to the tug towards the extremes. He is a conscientious man since he seeks the truth despite extremist clamors. And he is a decisive man for he takes his own stand.

You will need to judge between conflicts of emotion and reason. Scan them both carefully for both are often fraudulent. Suspect your emotions when to follow them would be self gratifying. Suspect your reasoning when it leads to a conclusion that runs counter to a deep instinct of rightness. Deep instincts arise from racial experience—and experience far outweighs our often faulty logic.

You will often be swayed towards pessimism or optimism. The extremes of either are rarely justified by the event. Foolish optimism is to me always exemplified by the naïve communist who believes that after the inhumanity of a revolution, a people will develop such unselfish qualities as to make a success of a system of life fit only for angels. The pessimist by those who feel that democratic institutions are

doomed because we have a few flourishing dictators. The truth lies always between the extremes. May you all be happy enough to find it ever a little on the optimistic side.

You will be tempted to undue self-importance by success and betrayed into depression through failure. A little success poorly taken is as dangerous to our reputation as a little liquor to a light head. When you feel inflated by success pour on a little of the cold water of depreciation lest you present an unseemly spectacle. As for failures why none of them are as serious as they seem at the moment. Failures are only incomplete attempts. I don't know how many failures it would take to beat a really good man.

You may fall into the habit of excess work or you may overestimate the time you have for play. I am ill fit to advise you for I have been something of an extremist in both. Both make for happiness but there must be a due proportion. The days of work are somewhat like the waves of the blue sea hard to distinguish from each other—and the seascape is less monotonous if it is broken by strong headlands and green islands of vacation memories. The physician who has nothing in his life but his work can never really understand the people he is trying to serve. At best the physician is set apart from other men by his experiences. He regains some of that contact through his playtime. Do I flatter you by warning chiefly against overwork. Perhaps it is because I feel that few playboys would have been able to graduate.

Many of you have already been torn between religious faith and agnosticism. Fortunate those who have retained the great gift of faith. For many it will be necessary to live outside the stricter creeds and follow their own code. The spires above the rooftops of every community tell the thinking man of the depth of this human instinct and a man may well join a church because it is a tangible declaration that he is allied with those who stand in this world for the common principles of all religions. You will find, I am sure that in moments of danger or of grief prayer is instinctive. Few of us then wish to proclaim that we are "Captains of our Soul"; we instinctively seek aid above ourselves, as in the sailors prayer: "Lord remember how small is my bark and how wide are thine oceans".

I enjoin you then to seek in your lives to find a happy balance in all things. For by this means I feel you will continue the growth of mind and character so auspiciously begun, you will either solve the problems now besetting us or find philosophy to endure such as remain; and, neither unduly prosperous or poverty stricken you will all, I hope, safely attain the sure reward of good physicians, a deep satisfying happiness in your life work.



*Dr. John K. Winslow*  
1866-1937

# BULLETIN

OF THE

## SCHOOL OF MEDICINE, UNIVERSITY OF MARYLAND

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CARL D. CLARKE, *Staff Artist*

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### DR. JOHN RANDOLPH WINSLOW

Once again the University of Maryland is called upon to mourn the loss of a member of its staff. On the morning of June 26, 1937, Dr. John Randolph Winslow, professor emeritus of Rhinology and Laryngology answered the call of his Maker, after a lingering illness of seven years.

Dr. Winslow was born in Baltimore, Md., on June 10, 1866. He was the eighth child of the late Dr. Caleb Winslow and Jane Paxson Parry, daughter of Oliver Parry and Rachel Randolph of New Hope Pa.

John R. Winslow received his early education at the Moses Brown Friend's School, of Providence, R. I. He was graduated from the Johns Hopkins University with the degree of B.A. in 1886. He received his M.D. degree from the University of Maryland School of Medicine in 1888. After graduating in medicine he pursued post-graduate work at the University of Vienna (1890); University of Munich (1895) and University of Berlin (1905).

In 1888-1889, he was Lecturer on Chemistry and from 1889 to 1894, Professor of Physiology at the Women's Medical College (Baltimore). From 1903 to 1913, he held the chair of Clinical Professor of Diseases of the Nose and Throat at the University of Maryland, and from 1913 to 1921, he was the director of this department with the rank of Professor of Rhinology and Laryngology. In the latter year he retired from active teaching with the rank of Professor Emeritus.

He was one of the surgeons at the Presbyterian Eye, Ear and Throat Hospital (Baltimore) from 1891 to 1908 and from 1909 until his retirement from practice in 1930 a surgeon and member of the staff of the Baltimore, Eye, Ear and Throat Hospital.

Dr. Winslow was a frequent contributor of articles on his specialty to current medical literature and was a member of the American Medical Association, the Medical and Chirurgical Faculty of Maryland, the Baltimore City Medical Society, the Baltimore County Medical Society, and a fellow of the American College of Surgeons and of the American Laryngological, Rhinological and Otological Society.

He was married on February 6, 1894, to Elizabeth Lewis Reed, now deceased, a daughter of Dr. Thomas B. Reed and his wife, Mary Campbell of Media, Pa.

Dr. John R. Winslow was an able teacher, a conservative but capable operator, and above all a man of sterling qualities and unimpeachable character. He was liked by students and patients and enjoyed the confidence of his colleagues.

# PROCEEDINGS

## OF THE UNIVERSITY OF MARYLAND BIOLOGICAL SOCIETY

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Baltimore, Md.

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School of Medicine  
Baltimore, Md.

C. JELLEFF CARR, *Treasurer*  
School of Medicine,  
Baltimore, Md.

RONALD BAMFORD, *Secretarial Representative*  
Department of Botany  
College Park, Md.

### *Councillors*

JOHN C. KRANTZ, JR.  
H. BOYD WYLIE  
FRANK H. J. FIGGE  
A. Y. RUSSELL

### THE EIGHTIETH PROGRAM MEETING

The Eightieth Program Meeting of the Society was held Tuesday, November 10th, 1936, in the Gordon Wilson Memorial Hall of the University Hospital. Dr. Vanden Bosche presided. The speaker, Dr. Sven Hörstadius, was a guest of the society and was introduced by Dr. Figge. The paper dealt with Investigations on Determination in the Early Development of the Sea Urchin. The outstanding demonstration in this piece of work was the potentialities of certain parts of the egg or early embryological stages, and the ability of the transplant to evoke its characteristic reaction. An author's abstract could not be obtained.

### THE EIGHTY-FIRST PROGRAM MEETING

The Eighty-First Program Meeting of the Society was held Tuesday, December 15th, 1936 in the Gordon Wilson Memorial Hall of the University Hospital. Dr. Vanden Bosche presided. Papers were presented by Dr. Hyman S. Rubinstein, of the Neuro-Endocrine Research Laboratory of Sinai Hospital, Baltimore, on "Repair of Genital Hypoplasia in the Male" and by Dr. Frank H. J. Figge of the Department of Anatomy, School of Medicine, on "Studies on the Biology and Biochemistry of Pigment Formation and Destruction." Author's Abstracts of these papers were not available.

## THE EIGHTY-SECOND PROGRAM MEETING

The Eighty-Second Program Meeting of the Society was held Tuesday, January 12th, 1937 in Chemical Hall, Medical School. Dr. Vanden Bosche presided. Papers were presented by (1) C. Jelleff Carr and Frances F. Beck; (2) Ruth Musser, W. G. Harne and John C. Krantz; (3) Frances F. Beck, C. Jelleff Carr, and John C. Krantz, all from the Department of Pharmacology of the Medical School. Abstracts of these papers appear below.

## THE METABOLISM OF ADRENALECTOMIZED RATS

C. JELLEFF CARR AND FRANCES F. BECK\*

In the 10 animals adrenalectomized, the per cent caloric decrease ranged from -3 to -51 per cent. These changes in metabolism are concomitant with changes in body temperature, the animals exhibiting low caloric output also showing low body temperatures. The authors conclude that after removal of both adrenal glands in the rat there is a reduction of about 25 per cent in the total metabolism. The amount of foodstuffs consumed is decreased without change in the ratio of carbohydrate to fat metabolism. The normal rats maintained on a restricted diet under similar temperature conditions do not show a reduction in total metabolism. The adrenalectomized rat after consuming carbohydrate food exhibits a R.Q. comparable to a normal animal. A rise in body temperature and metabolism was observed in acute adrenal insufficiency in 8 of the 10 animals studied. One table and two graphs are given of the condensed values obtained.

## A FURTHER STUDY OF THE EFFECT OF CYANIDES ON RAT SARCOMA

RUTH MUSSER, W. G. HARNE AND JOHN C. KRANTZ, JR.†

Walker rat sarcoma 319 showed no growth inhibition or tendency to regression following the administration of potassium cyanide as described. The sodium nitrite-sodium thiosulfate antidote, according to these experiments protects the viability and growth of this neoplasm as well as the life of the animal.

## A STUDY OF THE SUGAR ALCOHOLS AND THEIR ANHYDRIDES ON THE DISSOCIATION CONSTANT OF BORIC ACID

FRANCES F. BECK, C. JELLEFF CARR AND JOHN C. KRANTZ, JR.‡

1. The effect of a number of sugar alcohols, related compounds, and anhydrides of sugar alcohols upon the dissociation constant of boric acid has been studied.
2. In general, the anhydrides of the sugar alcohols potentiate the dissociation of boric acid to a lesser degree than do the sugar alcohols themselves. Erythritan is

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\* From the Department of Pharmacology, School of Medicine, University of Maryland, Baltimore, Md.

† From the Department of Pharmacology, School of Medicine, University of Maryland, Baltimore, Md.

‡ From the Department of Pharmacology, School of Medicine, University of Maryland, Baltimore, Md.



dissimilar in this respect, exerting an effect greater than either erythritol or mannitol.

3. Propylene glycol has no effect on the dissociation of boric acid. The introduction of a ketone or aldehyde group into the molecule with the formation of dihydroxyacetone and glyceric aldehyde, respectively, potentiates the dissociation of boric acid to a greater degree than does glycerol with three hydroxyl groups in the molecule.

#### THE EIGHTY-THIRD PROGRAM MEETING

The Eighty-Third Program Meeting of the Society was held Tuesday, February 9th, 1937 in Chemical Hall, Medical School. Dr. Vanden Bosche presided. Papers from the Department of Physiology were read by Dr. Walter S. Root and Mr. Albion Bernstein. An abstract of Mr. Bernstein's paper appears below.

#### THE DIFFUSION RATES OF VARIOUS SUGARS FROM THE SUBARACHNOID SPACE

ALBION BERNSTEIN

Gregersen and Wright and others have shown that if a considerable amount of glucose is introduced into the venous blood some of it can later be detected in the cerebrospinal fluid. Sucrose, introduced in the same manner does not permeate into the space. The more marked diffusability of glucose explains the secondary rise of intracranial tension when hypertonic solutions of this substance are administered intravenously to relieve cerebral compression, since the portion that has found its way into the fluid remains there after the concentration in the blood has returned to normal and thus the brain becomes hypertonic. No such secondary rise occurs with the use of sucrose since it does not enter the cerebrospinal space.

To determine whether this selective permeability of the blood-spinal fluid barrier is the same in the opposite direction, namely from spinal fluid to blood, various sugars were injected into the cisternal space. It was found that an osmotically equivalent amount of the twelve-carbon sugar, sucrose, produced a greater and more prolonged rise of intracranial pressure than the hexose, glucose. This indicates that more of the disaccharide remained within the space and therefore exerted a greater osmotic effect. In order to eliminate the possibility that the more rapid disappearance of glucose was due to the fact that it was directly removed by the nervous tissue and oxidized, galactose—a hexose not metabolized by the brain (Roe and Cowgill)—was used as a standard of comparison. It was found that apparently galactose disappeared even a little more rapidly than did glucose. The difference was not large and may not be significant but it is interesting in that the Cori's have found that galactose also leaves the gut more rapidly than does its isomer glucose.

#### THE EIGHTY-FOURTH PROGRAM MEETING

The Eighty-Fourth Program Meeting of the Society was held Tuesday, March 9th, 1937 in the Gordon Wilson Memorial Hall of the University Hospital. Dr. Vanden Bosche presided. Papers were read by Dr. William E. Evans of the Department of Pharmacology

of the Medical School and by Dr. H. G. du Buy of the Department of Botany, College Park, abstracts of which appear below.

#### THE PHARMACOLOGY OF SANTONIN AND CERTAIN OF ITS DERIVATIVES

WILLIAM ELLSWORTH EVANS, JR.\*

The chemical and pharmacological properties of santonin, five oxides of santonin, santoninoxime and santoninamine sulfate were reviewed.

The fatal concentration of isoartemisin for the earthworm, as tested by the Sollmann method, was between 0.033 and 0.066 per cent. Liquefaction of the external musculature began immediately in the higher concentrations of the drug, leading to rupture of many of the worms within two hours. Straub-tube experiments showed isoartemisin to be an excellent vermifuge.

Isoartemisin did not effect the rate, amplitude of contraction or output of the frog heart when perfused in a concentration of 0.008 per cent. Perfusion of frog legs by a slightly modified Laewen-Trendelenburg technic showed it to be a peripheral vasodilator.

Isoartemisin had neither an immediate nor a delayed effect on the blood-sugar level of fasting rabbits when administered in large or small doses. Doses of 0.1 gm. per kilo to 0.4 gm. per kilo had no effect on the alimentary hyperglycemia produced by glucose in the rabbit.

No acute toxic effects were observed, although doses of 0.4 gm. per kilo were administered twice, 1.0 gm. per kilo nine times and 1.2 gm. per kilo three times. Frequent administration of the drug over long periods caused death in many cases. Advanced degeneration of the liver and kidney tubules was observed in many organs and slight degeneration of the remaining organs was found.

Santoninamine sulfate caused a pronounced but delayed lowering of blood-sugar level in 3 out of 4 rabbits. The last determination made on the fourth animal showed an unusually high blood-sugar level. All of the experiments were terminated by death. Histological examination of the livers showed little injury. The kidneys, however, showed slight to marked tubular degeneration.

#### SOME EVIDENCE FOR MEDIATORS IN LOWER ANIMALS AND PLANTS. THE RELATION TO ACTION POTENTIALS

H. G. DU BUY†

It has been shown that the conduction of excitation in plants (*Mimosa*) starts with a change in permeability of certain cells (A) followed by the transport of an activating substance (B). Electrically an initial negativity could be demonstrated corresponding with (A) and followed by a group of waves corresponding with (B). There is some evidence that similar processes occur in the neuro-muscular systems of animals. These processes are more difficult to analyze because they occur about one hundred times faster than in plants. A suitable animal object seemed to be the five retractor muscles and nerves attached to the calcareous ring of the oesophagus of the sea cucumber *Thyone briareus*, a Holothuroid.

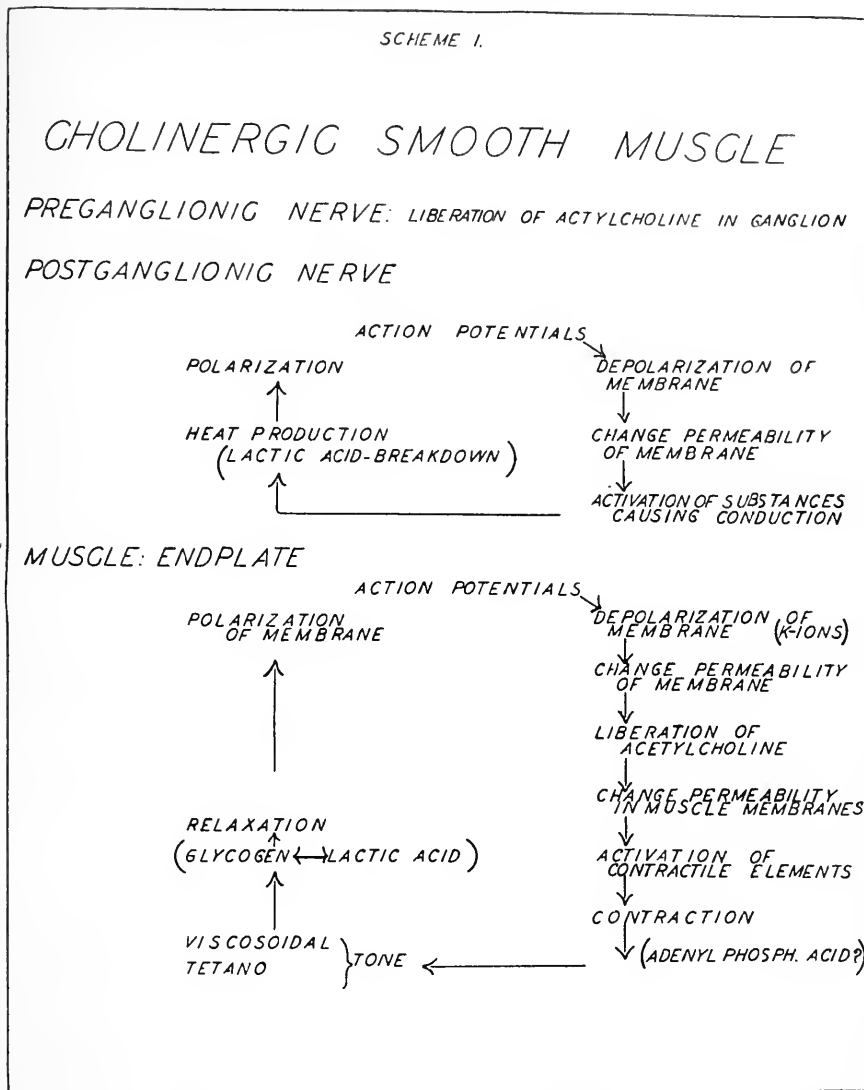
The histological characteristics of these muscles and their sensitivity to choline

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\* From the Department of Pharmacology, School of Medicine, University of Maryland.

† From the Department of Botany, University of Maryland, College Park.

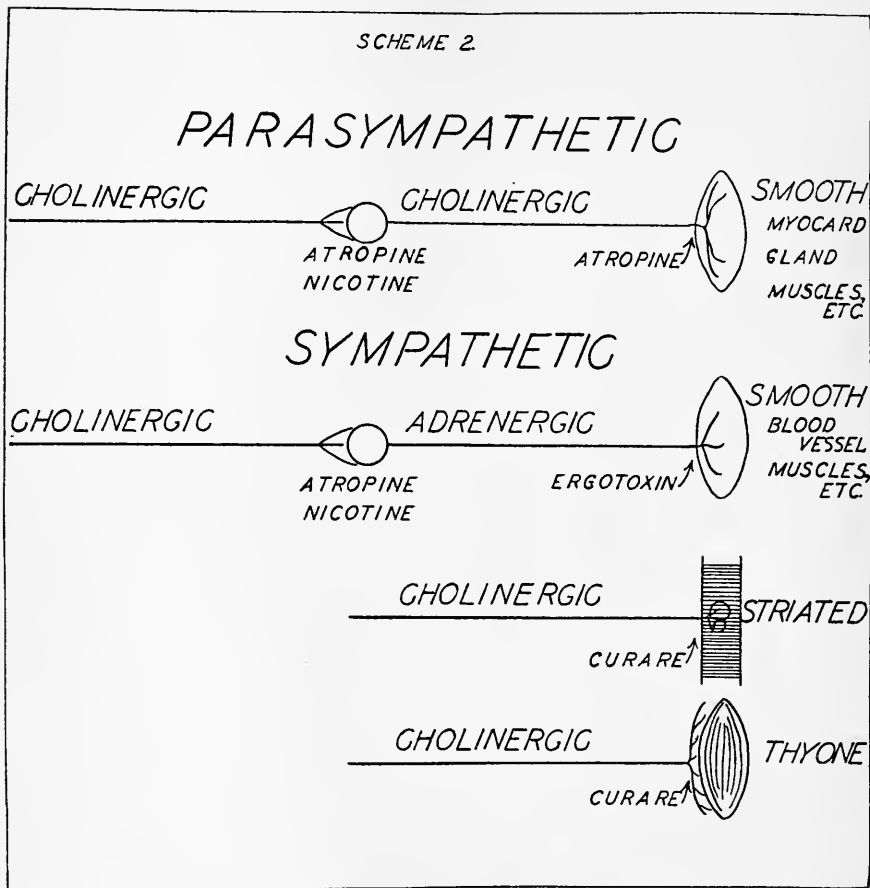
esters and adrenalin can be compared with properties of vertebrate smooth muscle; the muscles behave like vertebrate striated muscle in that curare blocks the propagation of the disturbance from nerve to muscle.



After curarisation no electric action potentials can be obtained while local contractions still occur. These phenomena allow a further differentiation between the properties of the conducting and contractile elements because they indicate that action potentials are not related with contraction but with propagation of disturbances. After curarisation of a part of the muscle a "distant" contraction

of the non-curarised part can be observed after stimulation of the curarised part. This means that conduction in the curarised part is still possible although this does not lead to contraction in this part.

The first scheme indicates a possible explanation. The curare interferes there where the liberation of a mediator occurs, possibly by a decrease in permeability. The mediator is probably a choline-compound because acetylcholine causes a con-



traction in *Thyone briareus* even in a concentration of 1 part in  $10^6$  parts sea water (about the sensitivity of the leech preparation).

Acetylcholine causes a contraction as well before as after curarisation although after curarisation no action potentials could be detected. This means that the presence of conductile elements is not needed for the activity of acetylcholine. (In the scheme it is therefore placed after the action potential.)

Adrenalin causes relaxation as well before as after curarisation (see scheme for the phase in which it supposedly acts).

The muscle action potentials (spikes) are therefore not an indication for the activity of a mediator but for a process previous to that.

Only hypotheses are presented, as well in the case of animals as of plants, about the action of the mediator on the effector.

A comparison of the Thyone preparation with other nerve-muscle types is given in the following scheme in which the drugs are indicated which have an effect similar to that of curare.

### THE EIGHTY-FIFTH PROGRAM MEETING

The Eighty-Fifth Program Meeting of the Society was held Tuesday, April 27th, 1937, in the Chemical Lecture Room at College Park. Dr. Vanden Bosche presided. Papers were read by Dr. Malcolm M. Haring of the Department of Chemistry, College Park and by Dr. Walter H. Hartung of the Pharmacy School, in Baltimore. Abstracts of these papers appear below.

#### THE GLASS ELECTRODE

MALCOLM M. HARING

The determination of the pH of biological fluids can often be accomplished only with the aid of the glass electrode. The discovery that the potential at a glass-solution interface is determined essentially by the hydrogen ion concentration was made over thirty years ago by the biologist Cremer. However, the development of the glass electrode into a convenient and reliable instrument of research and routine measurement has occurred within the last decade.

The glass electrode is a very thin membrane of glass separating a solution of known pH and the unknown solution. Electrical contact is made by means of highly reversible reference electrodes, e.g., calomel electrodes, dipping into the two solutions. In operation, it differs from all other hydrogen ion indicating electrodes in that no oxidation or reduction is involved. Apparently hydrogen ions are, by some mechanism, transported through the membrane. Consequently it will function reliably in oxidizing and reducing media. Furthermore it gives a steady potential immediately.

The principal disadvantages are the high resistance of the membrane and the failure of the two sides to function alike. The latter gives rise to the so-called "asymmetry potential." It can be overcome by use of suitable glasses,—Corning 015 is excellent,—and empirical calibration on buffers of known pH. The high resistance can be somewhat reduced by the use of excessively thin membranes at the cost of fragility. Numerous cells have been designed in the effort to combine comparatively low resistance with a certain degree of ruggedness.

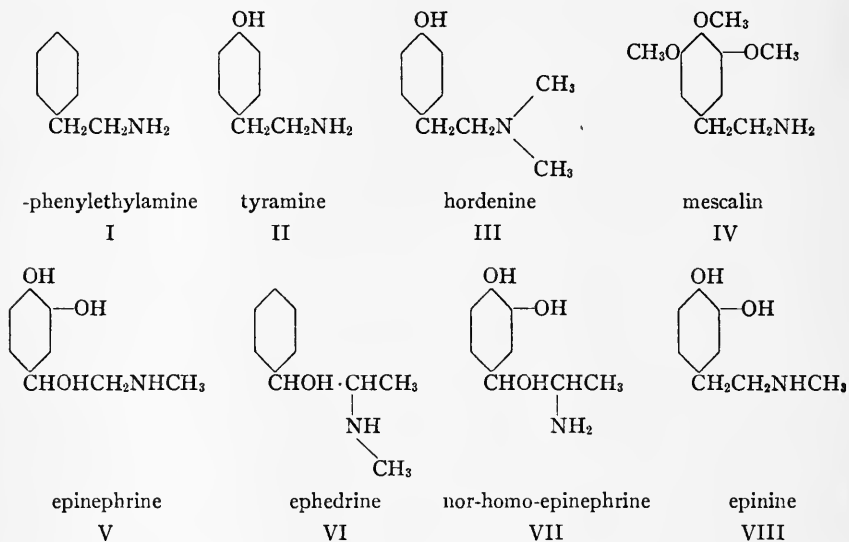
The potentials may be measured, with very thin membranes, in the orthodox manner. The modern tendency, however, is to use a thicker membrane with measuring circuits involving either a quadrant electrometer, some sort of vacuum tube amplifier or an amplified null ballistic device. The arrangements of the last two types are legion. Regardless of which of these last three devices is used, there must be adequate shielding against external electrical disturbances. Assuming proper potentiometric technique, the following may be set roughly as the precision limits obtainable:— 0.1 pH for direct measurement, 0.01 pH for the last three devices and ordinary care and 0.001 pH for the last three devices with the utmost refinement of circuits, shielding, etc. Several excellent portable equipments are now available commercially at reasonable cost which will measure reliably to a few hundredths of a pH unit.

In conclusion, it is interesting to note, in addition to the obvious applications of the glass electrode, that it has recently made possible the automatic control of the acidity of bacterial culture media for periods of a week or more.

THE EFFECT OF CHEMICAL STRUCTURE ON PHYSIOLOGICAL ACTIVITY (ARYLAKANOLAMINE SERIES)

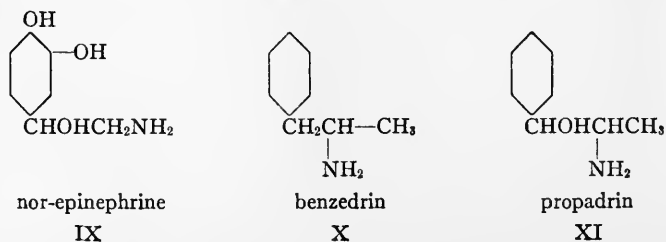
WALTER H. HARTUNG

Perhaps in no group of chemically related compounds does the effect of variation in structure on physiological activity appear so well solved as in the series containing the phenylethylamine skeleton (I). To this group belong tyramine (II), hordenine (III), mescaline (IV), epinephrine (V) and ephedrine (VI).



The first investigation of these compounds was reported by Barger and Dale (J. Physiol. **41**, 19 (1910)); they stated that the minimal skeleton for maximum or optimum pressor activity is that found in phenylethylamine (I). This conclusion was later confirmed by Hartung and Munch (J. Am. Chem. Soc. **53**, 1875 (1931)), with four isomeric phenylpropylamines.

Data from a large series of primary, secondary and tertiary amines show that the maximum pressor activity and minimum toxicity is found in the primary amines. (Hartung, Chemical Reviews **9**, 414, (1931) Table III.) Epinephrine, for example, is less active and about three times more toxic than nor-epinephrine (IX). (Tainter, Arch, Internat. Pharmacodyn. Ther. **41**, 365 (1931).)



If the alkyl chain of Barger and Dale's minimum skeleton is increased to three carbon atoms, the pressor activity is effective after oral administration. (Chen and Schmidt, *J. Pharmacol.* **24**, 339, (1924); Chen, Wu and Henriksen, *ibid*, **36**, 363 (1929).) The best illustration of this phenomenon is a comparison of epinephrine (V) with its isomer nor-homo-epinephrine (VII); the latter after oral administration produces a remarkable and strong rise in the blood pressure of an experimental animal (Hartung, Munch, Miller and Crossley, *J. Am. Chem. Soc.* **53**, 4149 (1931).) Increasing the length of the side chain further, to four or more carbon atoms, gives products in which the pressor activity practically vanishes (Hartung, Munch, Deckert and Crossley, *J. Am. Chem. Soc.* **52**, 3317 (1930)).

An alcoholic hydroxyl attached to the carbon bearing the aromatic nucleus serves to increase the pressor activity and, probably, to decrease the toxicity. Thus, epinine (VIII) is 1/12 as active as epinephrine (V) (Tainter, *J. Pharmacol.* **40**, 52, (1930)), while benzedrin (X) is 1/7 as active and three times more toxic than propadrin (XI) (Tainter, *Arch. Internat. Pharmacodyn. Ther.* **46**, 192 (1933)).

Of the phenolic hydroxyls, the OH group meta to the alkanolamine side chain of epinephrine exerts a profounder effect than does the para-OH in converting the activity from a musculotropic (ephedrine-like) to a sympathicotropic (epinephrine-like) activity; but to obtain true sympathicotropic activity both hydroxyls must be present. (Tainter, *J. Pharmacol.* **40**, 43 (1930); cf. Hartung, *Chemical Reviews* **9**, 389 (1931).)

Recent work, as yet unpublished, indicates that possibly the aromatic nucleus need not be present to obtain pressor activity.

#### THE EIGHTY-SIXTH PROGRAM MEETING

The Eighty-Sixth Program Meeting was held Tuesday May 11th, 1937 in the Gordon Wilson Memorial Hall in the University Hospital. Dr. Vanden Bosche presided. A paper was read by a guest of the Society, Dr. Howard A. Kelly, on the "Memories of Earlier Days." The society was highly honored on this occasion and cherishes the association which this meeting afforded. The address was filled with examples of courage and spirit. With radiance of personality and masterly presentation of historical facts, Dr. Kelly held the attention of his audience for over an hour—an hour which seemed much too short.

The Society shall always be indebted to its guests, who as leaders in their respective fields, share the richness of their experience with all who come to hear.

Respectfully,  
O. G. HARNE, *Secretary*

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The names listed above are officers for the term beginning April 15, 1937, and ending June 30, 1938.

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## SPRING ACTIVITIES

The Spring Activities, June 3 to June 5, 1937 inclusive, are now a sweet memory. The graduation exercises were held as customary at the Richie Coliseum, College Park, Md. The Medical School celebrated its One Hundred and Thirtieth Anniversary. Considering the times, the attendance was very gratifying to those in charge of the arrangements.

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## PROGRAM

JUNE, 3, 1937

9:00 a.m.—Registration at the Main University Building.

10:00 a.m.—12:00 Noon—Clinics and Demonstrations by Chiefs of Departments:

1. Analgesia and Anesthesia in Obstetrics by Dr. Louis Douglass.
2. Cirrhosis of the Liver by Dr. Thomas R. Sprunt.
3. Treatment of Tetanus by Dr. C. Reid Edwards.
4. Discussion of Certain Ovarian Tumors in Regard to Their Endocrine Effects Upon the Patient by Dr. J. Mason Hundley, Jr.



1:00 p.m.—Luncheon.

2:00 p.m.—Annual meeting of the Medical Alumni Association,  
seventh floor, University Hospital.

7:00 p.m.—Annual Banquet, Belvedere Hotel.

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GUESTS OF HONOR

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*President of the University of Maryland*

THE HONORABLE HOWARD W. JACKSON  
*Mayor of Baltimore*

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GRADUATES OF THE 1937 SCHOOL OF MEDICINE  
*University of Maryland*

A. J. LOMAS, M.D.

*Superintendent of the University Hospital*

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SPEAKERS

DR. FRANCIS J. KIRBY, Toastmaster  
*President of the Alumni Association*

H. C. BYRD

*President of the University of Maryland*

THE HONORABLE HOWARD W. JACKSON  
*Mayor of Baltimore*

CLARENCE P. SCARBOROUGH  
*President of the Senior Class*

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*Dean of Medical Faculty*

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## PRESIDENT BYRD TELLS OF \$500,000 FUND FOR NEW BUILDING

Three hundred alumni members and the members of this year's graduating class of the School of Medicine of the University of Maryland cheered last night when Dr. H. C. Byrd, president of the university, announced that the "half-million dollars necessary for a new medical school building is now available and construction will soon begin."

In outlining the accomplishments of the university in obtaining appropriations for needed buildings and equipment, Dr. Byrd added that "these are merely the material advancements of a great university."

"The real achievements and the real future of this institution," he

said, "depend more deeply on how our graduates and alumni live up to the obligations and ideals inculcated in them during their student days."

Dr. William H. Marsh, of Solomons, Md., a graduate in the class of 1876, was the oldest alumnus present. Dr. Marsh, now 86, retired from the United States Department of Public Health in 1930.

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## PRE-COMMENCEMENT EXERCISES

JUNE 4, 1937

*The Lyric, Baltimore*

### ORDER OF EXERCISES

J. M. H. ROWLAND, M.D. ScD. LL.D. Presiding  
*Dean of the School of Medicine, University of Maryland*

- I. THE PROCESSION: *Coronation March.*
- II. THE INVOCATION: MORRIS S. LAZARON, M.A. LL.D., Madison Avenue Temple, Baltimore, Md.
- III. GREETING: H. C. BYRD, B.S., LL.D., *President of the University.*
- IV. THE ADDRESS: MAURICE C. PINCOFFS, B.S. M.D., *Professor of Medicine, University of Maryland.*
- V. INTRODUCTION OF THE MEMBERS OF THE FACULTY OF PHYSIC:  
BY DR. J. M. H. ROWLAND.
- VI. INTRODUCTION OF GRADUATES AND AWARD OF HONORS: DR. J. M. H. ROWLAND, assisted by DR. H. BOYD WYLIE.
- VII. ADMINISTERING OF HIPPOCRATIC OATH: DR. J. M. H. ROWLAND.
- VIII. BENEDICTION: JAMES H. STRAUGHN, D.D., North Baltimore Methodist Protestant Church.
- IX. THE RECESSION: *Aida March.*

### THE MARSHALLS

*Chief Marshall, T. B. AYCOCK, M.D.*

THOMAS O'ROURK, M.D.	T. NELSON CAREY, M.D.
GEORGE H. YEAGER, M.D.	HARRY C. HULL, M.D.
CYRUS F. HORINE, M.D.	JOHN E. SAVAGE, M.D.

*Music by Ruffino Iula*

## PROGRAM

JUNE 5, 1937

## ORDER OF EXERCISES

MARCH—*The Man of the Hour*—Filmore.OVERTURE—*Light Cavalry*—von Suppe.SELECTION—*Maytime*—Romberg.MARCH—*Semper Fidelis*—Sousa.EXCERPTS—*High Jinks*—Friml.WALTZ—*Wedding of the Winds*—Hall.PROCESSIONAL MARCH—*Triumphal from Athalia*—Mendelsohn (The University of Maryland Band).

INVOCATION—RT. REV. EDWIN H. HUGHES, Resident Bishop, Methodist Episcopal Church, Washington Area.

ADDRESS—HONORABLE MILLARD E. TYDINGS, U. S. Senator.

CONFERRING OF DEGREES, PRESENTATION OF DIPLOMAS AND ANNOUNCEMENTS—PRESIDENT H. C. BYRD.

BENEDICTION—RT. REV. EDWIN H. HUGHES.

THE ACADEMIC RECEPTION.

RECESSIONAL MARCH—*Tannhauser*—Wagner (The University of Maryland Band).OTTO SIEBENEICHEN, *Director*CANDIDATES FOR DEGREES, DIPLOMAS  
AND CERTIFICATES

## HONORARY CERTIFICATES IN AGRICULTURE

EDWIN WARFIELD, JR., Maryland

PAUL LEWIS GUNBY, Sr., Maryland

JESSE PEYTON KING, Maryland

## SCHOOL OF MEDICINE

*Doctor of Medicine*

THOMAS GILBERT ABBOTT, Maryland.

R. STANLEY BANK, Maryland.

ERNEST BARNETT, New York.

EUGENE SYDNEY BERESTON, Maryland.

LEONARD BRILL, Maryland.

LESTER LEON BURTNICK, Maryland.

CARL EDWIN CARLSON, Connecticut.

J. R. CASANOVA Díaz, Puerto Rico.

ROLAND ARNOLD CHRISTENSEN, Pennsylvania.

JOSEPH MICHAEL COCIMANO, D. C.

STUART GRAY COUGHLAN, Maryland.

LOUIS EUGENE DAILY, Maryland.

CHARLES MAGNO D'ALESSIO, Connecticut

THOMAS VINCENT D'AMICO, New Jersey.

ELI DAVIDSON, New York.

NESHON EDWARD DERADORIAN, Connecticut.

EVERETT SCHNEPPE DIGGS, Maryland.

WILLIAM MONROE EISNER, New York.

EMANUEL SIMON ELLISON, Maryland.

HELEN ROBINSON ENSOR, Maryland.

PHILIP MICHAEL FELDMAN, New York.

- JOHN HANNON FINN, Massachusetts.  
 ISAAC PHILLIPS FROHMAN, Maryland.  
 SIDNEY RICHARD GEHLERT, JR., Maryland.  
 JOHN LAWRENCE GILLESPIE, New Jersey.  
 HERBERT GOFFIN, New York.  
 SIGMUND GOLDBERG, Maryland.  
 WILLIAM CECIL GORDON, New York.  
 ROBERT JOSEPH GORE, Maryland.  
 ELVIN EDWARD GOTTDIENER, Maryland.  
 FRANK GREENWALD, New York.  
 CHARLES SOLOMON HAHN, New York.  
 GROVER CLEVELAND HEDRICK, JR., West Virginia.  
 BENJAMIN HIGHSTEIN, Maryland.  
 LEO HOCHFELD, New York.  
 EUGENE WELCH HODGSON, Pennsylvania.  
 CHARLES WILBUR HOFFMAN, JR., Maryland.  
 WILLIAM COOLIDGE HUMPHRIES, Maryland.  
 SAMUEL JACKSON, New York.  
 ALAN JACOBSON, Maryland.  
 CLARENCE FREDERICK JOHNSTON, JR., Maryland.  
 JAMES PORTER JONES, West Virginia.  
 JAMES EARL KADAN, Maryland.  
 GORDON ARTHUR KAGEN, Pennsylvania.  
 D. FRANK OLEWILER KALTREIDER, JR., Pennsylvania.  
 ISADORE KAPLAN, Maryland.  
 JACK ALLEN KAPLAN, New York.  
 NATHAN KAPLAN, Maryland.  
 ALBERT HERBERT KATZ, Maryland.  
 ISADORE KATZ, New York.  
 IRVIN BERNARD KEMICK, Maryland.  
 IRVIN PHILIP KLEMKOWSKI, Maryland.  
 LESTER NORMAN KOLMAN, Maryland.  
 MITCHELL FRANK KUNKOWSKI, Maryland.  
 LOUIS WORON LESKIN, New York.  
 LEONARD WARREN LEVINE, Connecticut.  
 LEONARD JULES LEVINSON, New York.  
 ELMER GEORGE LINHARDT, Maryland.  
 EPHRAIM THEODORE LISANSKY, Maryland.  
 WILLIAM BROUGHTON LONG, JR., Maryland.  
 CHESTER JAMES LUBINSKI, Maryland.  
 STEPHEN CASIMIR MACKOWIAK, Maryland.  
 FRANK VINCENT MANIERI, Maryland.  
 IRENE THELMA MARINO, New York.  
 OTTO GEORGE NATHEKE, JR., New Jersey.  
 MILTON JOSEPH MEYER, New York.  
 EDWIN STEPHEN MULLER, Maryland.  
 JOSEPH ENNALLS MUSE, Maryland.  
 PHILIP MYERS, Maryland.  
 MAURICE NATARO, New Jersey.  
 RICHARD SPURGEON OWENS, JR., Virginia.  
 ISIDORE EARL PASS, Maryland.  
 AUGUST CONSTANTINE PAVLATOS, Pennsylvania.  
 LAWRENCE PERLMAN, New York.  
 PASQUALE HUMBERT PICCOLO, Connecticut.  
 FREDERICK PHILLIP POKRASS, Pennsylvania.  
 ELTON RESNICK, Maryland.  
 SAMUEL THOMPSON REDGRAVE REVELL, JR., Georgia.  
 HENRY LEWIS RIGDON, Maryland.  
 ISADORE MORRIS ROBINS, Pennsylvania.  
 MARTIN HERMAN ROBINSON, Pennsylvania.  
 REUBEN ROCHKIND, Maryland.  
 EPHRAIM ROSEMAN, Maryland.  
 MORRIS RUBIN, Connecticut.  
 GILBERT ELMORE RUDMAN, Maryland.  
 JOHN PAUL SAKOWSKI, New Jersey.  
 NORMAN ELLIS SARTORIUS, JR., Maryland.  
 CLARENCE PARKE SCARBOROUGH, JR., Pennsylvania.  
 JACOB EDWARD SCHMIDT, Maryland.  
 JOHN KING BECK EMORY SEEGAR, JR., Maryland.  
 JOSHUA SEIDEL, Maryland.  
 MILTON C. F. SEMOFF, New York.  
 SYDNEY SEWALL, Connecticut.  
 ABRAHAM ALBERT SHAPIRO, Maryland.  
 MEYER ROBERT SHEAR, Maryland.  
 MORTON MARVIN SPIELMAN, Maryland.  
 MANUEL STAPEN, New York.  
 BERNHARDT JOSEPH STATMAN, New Jersey.  
 ALBERT STEINER, Maryland.  
 THOMAS JOHN SULLIVAN, New York.  
 MASON TRUPP, Maryland.  
 GEORGE JONES WEEMS, Maryland.  
 HENRY WOLFE WEISS, New York.  
 FRANK DIXON WHITWORTH, Maryland.  
 MABEL GIDDINGS WILKIN, Texas.  
 RICHARD JONES WILLIAMS, Maryland.  
 ROBERT RODERIC WILLIAMS, New York.  
 ELDRIDGE HENRY WOLFF, Maryland.  
 JACK HENRY WOODROW, New York.  
 FRANK ANTHONY ZACK, Massachusetts.  
 ISRAEL ZELIGMAN, Maryland.

## DEGREES CONFERRED SINCE LAST COMMENCEMENT

- JOSEPH LOUIS STECHER, Maryland  
 GEORGE LOUIS VIEWEG, JR., West Virginia

## HONORS

University Prize Gold Medal, WILLIAM BROUGHTON LONG, JR.

*Certificates of Honor*

MORRIS RUBIN	JACOB EDWARD SCHMIDT
MORTON MARVIN SPIELMAN	R. STANLEY BANK
MABEL GIDDINGS WILKIN	

*The Dr. A. Bradley Gaither Memorial prize of \$25.00 for the best work in genito-urinary surgery during the senior year, MASON TRUPP*

## SCHOOL OF NURSING

*Graduate in Nursing*

MARY VIRGINIA BANES, Maryland.	LENA WINIFRED QUARTERMAN, Georgia.
WANDA DELPHINE BOSLEY, Maryland.	CAROLYN ROBERTA RAYME, Maryland.
CATHERINE ELIZABETH CARPENTER, Virginia.	MARY LAURIE RUDISILL, North Carolina.
SARAH CORNELIUS, Maryland.	FRANCES VIRGINIA SAPPINGTON, Maryland.
MILDRED ELISBETH CRAMER, Maryland.	DUSETTA ELIZABETH SCARBOROUGH, Maryland.
ESTHER MARY DALLMUS, Maryland.	CHARLOTTE EILEEN SHAFFER, Maryland.
NAOMI GRACE HERSH, Maryland.	EVELYN FREELove SHERRILL, Maryland.
MINA GERALDINE HOOE, West Virginia.	MARY IMOGENE SKINNER, West Virginia.
MARJORIE LUCILE KAUTZ, Pennsylvania.	JANE ISABELLE SLICK, Maryland.
MARY KLUKA, Pennsylvania.	ELEANOR FRANCES STAUFFER, Maryland.
SALLIE FRANCES KNIGHT, Virginia.	ROSE ELIZABETH STRICKLAND, Pennsylvania.
EDITH EVELYN LEWIS, Maryland.	EDNA EARL SUTTON, North Carolina.
EVELYN LUCILLE MATTSON, Maryland.	DOROTHY MERLE TOOM, Maryland.
MURIEL HILL McARTHUR, South Carolina.	MARGARET CATHERINE TURNER, North Carolina.
LOUISE MANNING MOYE, North Carolina.	HELEN KATHRYN WAGNER, West Virginia.
BEATRICE PATRICIA O'CONNOR, Florida.	MABYL JANE WILSON, Maryland.
WILLYE FRANCES PARKS, Virginia.	
ROSE PENNINGTON, Maryland.	
BEATRICE LORRAINE PILGRIM, Pennsylvania.	

## HONORS

*The Janet Hale Memorial Scholarship, given by the University of Maryland Nurses' Alumnae Association, to pursue a course in administration, supervisory, or public health work at Teachers College, Columbia University, to the student having the highest average inscholarship, JANE ISABELLE SLICK*

*The Elizabeth Collins Lee Prize to the student having the second highest average in scholarship, MINA GERALDINE HOOE*

*The Mrs. John L. Whitehurst Prize for the highest average in executive ability  
NAOMI GRACE HERSH*

*The Edwin and Leander M. Zimmerman Prize for practical nursing and for displaying the greatest interest and sympathy for the patients, MINA GERALDINE HOOE*

*The University of Maryland Nurses' Alumnae Association Pin, and Membership in the Association, for practical nursing and executive ability,  
ELEANOR FRANCES STAUFFER*

## SENATOR TYDINGS SPEAKS

University graduates should and must furnish leadership in the communities in which they live, Senator Tydings said today in an address to the 700 graduates receiving degrees from the University of Maryland.

"The world cannot afford to have well-educated men and women confine their activities to too great extent to their own personal problems," he continued.

"It is necessary that university graduates must give considerable amount of their time, talents and energy to the problems of the community, the State and the Nation. They must understand what taxation is wholesome and beneficial for the people and what expenditures of public funds are wise and sound and must have a knowledge of international relations and the extent of our national resources.

"The graduate of 1937 must be sensitive to the human and civil needs of the people and he must foster the best educational system that can be devised."

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DEGREES PRESENTED BY PRESIDENT BYRD

Immediately after the address by Senator Tydings, Dr. H. C. Byrd, president of the university, presented degrees to graduates of the Baltimore and College Park branches of the university. Among those receiving degrees was John E. Faber, Jr., football and lacrosse coach at the university and professor of bacteriology, who was given a degree of doctor of philosophy.

When the graduates of the School of Law came forward, Dr. Byrd interrupted the program and, amid applause, announced that Herbert R. O'Connor, Attorney General, himself an alumnus of the law school, would present the diplomas to this group.

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CONTRIBUTIONS OF \$56,000 ANNOUNCED BY  
PRESIDENT BYRD

After presenting the degrees, President Byrd announced that more than \$56,000 had been given to the university in the last year by private contribution. Among the list of gifts was a grant of \$30,000 from the National Electrical Manufacturers' Association, to be given in three annual installments of \$10,000 for "research on the preservation of foods by refrigeration."

Dr. Byrd also announced that the Board of County Commissioners of Cecil County had made available to the university approximately 4,000 acres of land to be developed and maintained as a park and recreational area.

The private gifts to the university, totaling \$56,837, announced by Dr. Byrd were:

*Baltimore*

- By Mrs. Mary B. Redwood, a check for \$1,000 for purchasing equipment for use in dispensary, gift to be known as Caroline Dorsey Coale Memorial.
- By Rockefeller Foundation, grant of \$6,000 (\$3,000 annually for two years) for providing salaries of assistants and to purchase equipment and materials for Dr. Magnus Gregerson in the department of physiology of the medical school in connection with research on plasma volume changes.
- By Rockefeller Foundation, grant of \$2,500 for research in the department of anatomy of the medical school.
- By the estate of the late Robert E. Ward, \$300 to the University Hospital.
- By the late Walter B. Brooks, \$1,000 given with the expressed wish that it is to be used for the University Hospital.
- By the International Cancer Research Foundation, \$500 this year and \$1,000 next year, for research under direction of Dr. John L. Krantz.
- By United States Pharmacopœial Convention, \$2,000 for research under Dr. Krantz.
- By Rockefeller Foundation, \$2,500 for research under Dr. Eduard Uhlenhuth.
- By Dr. Julius Friedenwald, \$50 for research under Dr. Uhlenhuth.
- By the medical faculty to the department of gross anatomy, Celsus De Medicina 1497, \$50.

*Gifts to Hospital*

- Patients and friends, \$255.
- Estate of Fannie Lentz, \$101.95.
- Miscellaneous equipment, \$3,559.50.

*Gifts To Medical Library*

- From Dr. A. W. Valentine, class of 1904, \$5.
- Dr. Max Trubek, of New York, class of 1926, \$50.



Dr. David Ingram, Houston, Pa., class of 1902 manuscript book notes of the lectures of Dr. Nathaniel Potter.

#### *College Park*

The Board of County Commissioners of Cecil county purchased approximately 4,000 acres of land and offered to donate it to the State to be developed and maintained as a park and recreational area.

The refrigeration division of the National Electrical Manufacturers' Association has made a grant of \$10,000 annually for the next three years for research on the preservation of foods by refrigeration.

Victor E. Albright, president of the Randall State Bank of Madison, Wis., has established in the university a scholarship fund consisting of \$5,000 par value high-grade bonds, the income from which is to be used to provide an annual scholarship of \$200 in the university for the benefit of graduates of high schools in Garrett county, Maryland. The scholarship is in the nature of a memorial to Mr. Albright's father and mother.

#### *Gifts to Experiment Station*

Associated Seed Growers, New Haven, Conn. \$216.  
 American Cyanamid Company, New York City, \$200.  
 Davidson Chemical Corporation, Baltimore, \$300.  
 Kentucky By-Products Company, Louisville, \$250.

#### *Library Books*

From Mrs. Helen Buckley Rose and Mrs. Dorothy Buckley Smith, about 700 books from father's library (late Dr. Samuel S. Buckley).  
 From Dr. Henry Barton Jacobs, 100 volumes of Herd Register of the American Jersey Cattle Club.  
 From Dr. Nathan Winslow, in name of Mrs. John R. Winslow and himself, 200 volumes.  
 From estate of J. R. Bibbins, of Washington (through American University), 2,950 volumes of books on transportation.  
 Davis Library (received since last commencement).

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### NOTABLES IN THE PROCESSIONAL

In the processional line, led by Dr. R. V. Truitt, professor of aquaculture, were distinguished guests from all parts of the State. Among those marching were Senator Tydings, Mayor Jackson, Attorney General O'Connor, Dr. W. W. Skinner, chairman of the university's

board of regents, and Mrs. John L. Whitehurst, a member of the board of regents.

Also in line were Paul Lewis Gunby, of Somerset county, Edwin Warfield, Jr., of Howard county, who were awarded honorary degrees in agriculture.

Shortly before the exercises began, Dr. Skinner announced that at a meeting of the board of regents late yesterday, approval was given to all of the building projects passed by the last session of the Legislature, and that the program would be started as soon as bids were obtained.

Among the improvements listed in the program were:

College Park—Home economics building, poultry building, men's dormitory, new classrooms, laboratories and equipment for engineering group, addition to infirmary, remodeling equipment in dairy manufacturing building, garage and workshop and apiary.

Baltimore—Two new floors to the University Hospital, additions to buildings of dental and pharmacy schools, addition to nurses home and equipment for law school.

Dr. Skinner said he hoped the major portion of the building construction would be completed before the opening of school next fall.

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### THANKS

The Board of Regents, the President of the University, the Faculty of Physic, the Board of Directors and Officers of the Medical Alumni Association wish to express through the pages of the Bulletin their sincere appreciation to the visiting alumni for their generous support in making this the most successful commencement ever held by the University. The interest and loyalty manifested by the alumni were a source of great satisfaction to the committee in charge of arrangements. The following alumni registered during the activities.

Drs. L. O. Schwartz, Weirton, W. Va.; S. E., Buchanan, Concord, N. C.; E. H. Hedrick, Beckley, W. Va.; I. E. Sloan, Johnstown, Pa.; L. P. Jones, Pennsboro, W. Va.; J. E. Garner, Thomaston, Ga.; W. H. Marsh, Solomons, Md.; E. N. Boganegra Lopez, New York City; J. P. Linke, Plainfield, N. J.; Benjamin Ulanski, Philadelphia, Pa.; W. F. Gemmill, York, Pa.; S. W. Sweet, Utica, N. Y.; A. W. Browning, Ellore, S. C.; H. H. Rich, Newark, N. J.; D. O. George, Denton, Md.; Otto G. Matheke, Newark, N. J.; J. M. Adzimo, Bridgeport, Conn.; R. A. Allgood, Fayetteville, N. C.; S. I. Rosenthal, Scranton, Pa.; S. H. O'Neill, Blue Hill, Neb.; L. J. Bohl, Paterson, N. J.; Charles H. Audet, Waterbury, Conn.; G. F. Sargent, Towson, Md.; J. Morris Reese, Lutherville, Md.; A. H. Finkelstein, Towson, Md.; A. W. Valentine, Washington, D. C.; Charles W. Hartwig, Reisterstown, Md.; J. Henry Orff, Shillington, Pa; William W. Chase, Washington, D. C.; A. W. MacGregor, Paterson, N. J.; W. J. B. Orr, Washington, D. C.; A. W. Reier, Dundalk,

Md.; George L. Wurtzel, New York City; A. E. Man, New York City; Harry Billar Flushing, N. Y.; Goff P. Lilly, New York City; G. C. McCormick, Sparrows Point, Md.; C. J. B. Glowens, Harrisburg, Pa.; M. B. Davis, Dundalk, Md.; J. L. Matthesheimer, Jersey City, N. J.; Milford Hinnant, Micro, N. C.; D. M. Hoke, Beckley, W. Va.; D. N. Ingram, Houston, Pa.; Albert Goldey, New York City; S. Daniel Blum, New York City; H. V. Dutrow, Dayton, O.; W. A. Gracie, Cumberland, Md., R. E. Abell, Chester, S. C. Drs. Charles Reid Edwards, J. E. Savage, H. M. Robinson, Edgar B. Friedenwald, Frank K. Morris, N. E. Needle, C. B. Ensor; A. Samuels, H. E. Peterman, William S. Love, Jr., Alfred T. Gundry, Nathan Winslow, John F. Hogan, Louis H. Douglass, J. Morley Hoag, Monte Edwards, C. G. Warner, Mrs. Charles A. W. Briscoe, A. E. Goldstein, L. L. Keown, E. C. Reitzel, J. E. Legge, W. H. Triplett, William Todd, of Baltimore, Maryland.

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### THE CLASS OF 1912

The BULLETIN wishes to congratulate the local committee of the class of 1912 on the fine showing that it made during the commencement festivities. To Dr. Moses L. Lichtenberg, the genial chairman belongs most of the credit of giving the boys a fine time. This class leads the way. It has set the pace for the other classes to follow. The following communication is self-explanatory.

Dr. M. L. Lichtenberg  
Baltimore, Md.

Dr. Nathan Winslow,  
University Bulletin.

Dear Nathan:

I feel that some recognition should be given to the class of 1912 (U. of Md.) upon the successful completion of their Quarter Century Reunion. I am sure that as far as records of class reunions held by any class are concerned that the U. of Md. class of 1912 would take the prize. When we graduated we decided to hold a reunion every five years. Up to the present time we have had four reunions (the only exception being the twentieth during the height of the depression. We have always made a good showing and on two occasions two of our class-mates came from Puerto Rico. The last reunion the 25th anniversary of our graduation was held on June 3-4 5, 1937, at which time we had present 30 members or approximately half of the living members of our class. The program was as follows:

*Thursday, June 3rd:* Arrival of men. Registration. Inspection of Hospital. Alumni luncheon at University Hospital. Banquet at Belvedere Hotel in conjunction with Medical Alumni. Dinner for wives at home of Dr. E. S. Johnson.

*Friday, June 4th, 1 p.m.:* Luncheon at Southern Hotel for members and their wives.



4 p.m.: Cocktail party at summer home of Dr. E. A. Looper at Gibson Island for men and wives.

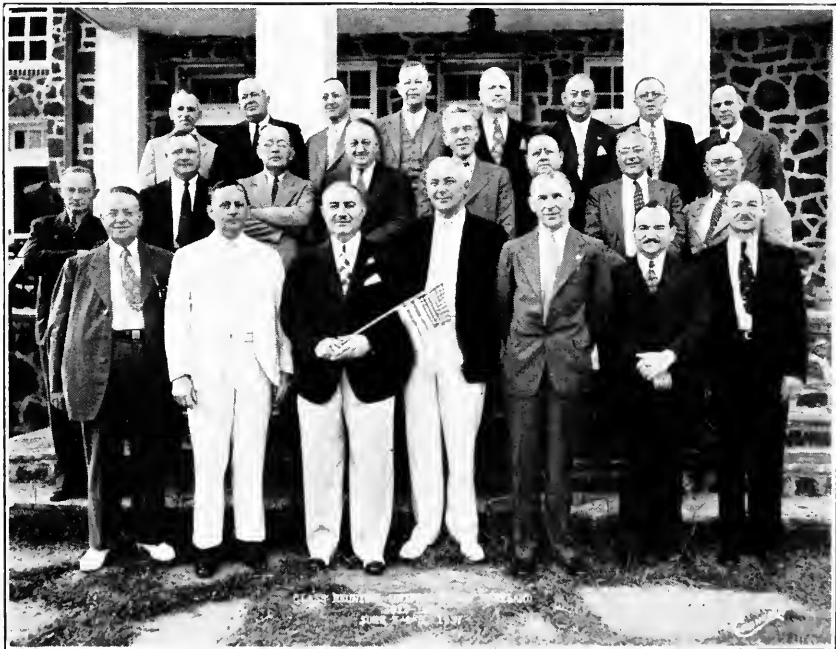
7 p.m.: Dinner at Gibson Island Club.

Saturday, June 5th: Luncheon for members at Maryland Club, tendered by Dr. R. P. Bay.

The following members were present at this Reunion.

*Local:* Chas. P. Clautice, Harry Deibel, Ernest Frey, E. B. Johnson, Moe L. Lichtenberg, Bertrand Lillich, Edward A. Looper, Wm. Michel, David Silberman, John Skladowsky, Thos. A. Stevens, John F. Traband.

*Out of Town:* Robt. E. Abell, Chester, S. C.; Reese Alexander Algood, Fayetteville, N. C.; Sidney Eli Buchanan, China Grove, N. C.; Wm. E. Gallion, Darlington, Md.; Dawson O. George, Denton, Md.; Albert Goldey, New York City; Ed Hennessey, Stratford, Conn.; Milford Hinnant, Micro, N. C.; Edwin Kolb, Holtsville, N. Y.; Benj. McGoogan, Morven, N. C.; Benj. Newhouse, Washington, D. C.; Harry H. Rich, Newark, N. J.; Jesse Stilley, Ludlow, Pa.; Edw. A. Straessley, Beaver Falls, Pa.; Wm. C. Terry, Hamlet, N. C.; C. Judd, Philadelphia, Pa.; Wm. Yeager, Hagerstown, Md.



Group of class of 1912

### FORECAST

Alumni Day 1937 was a very happy one in the Library, for so many of the Alumni came in to call, to exchange greetings, and to relate their experiences. The day was made memorable by three fine gifts:

A present of money for the Library Fund by Dr. A. W. Valentine, Class of 1904, of Washington, D. C.

A check for fifty dollars for the Library Fund from Dr. Max Trubeck, Class of 1926, of New York City.

A Manuscript note-book, taken from the lectures of Dr. Nathaniel Potter, Dr. Elisha DeButts, and others. Session of 1828-29, from Dr. David N. Ingram, class of 1922, of Houston, Pennsylvania, appraised in his library at one hundred dollars.

In the words of our President, Dr. H. C. Byrd: "It is a pleasure to know that they are interested in library work."

The University of Maryland, School of Medicine, founded 1807, was the first medical school on this continent to have a library. In 1938 the Library, founded 1813, will be one hundred and twenty-five years old, and the Librarian enters her twenty-fifth year of service. Is it too early to look forward and to plan for a "Jubilee"?

RUTH LEE BRISCOE,  
*Librarian of the University of  
Maryland, School of Medicine.*

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#### H. V. HOWER, M.D.

Dr. H. V. Hower, graduate of the College of Physicians and Surgeons of the Class of 1887, was honored upon half a century of active practice at Berwick, Pennsylvania on April 30, 1937, at a joint meeting of Rotary and Kiwanis Clubs and fellow physicians, and with the State Medical Society joining in the expression.

The expressions to Dr. Hower were many sided and in the form of congratulations, of the presentation of a certificate from the State Medical Society of tribute and congratulation; presentation by his fellow physicians of a gold watch charm with personal inscription; of flowers from the nurses and personnel of Berwick Hospital.

"Hale and hearty" and "going strong" despite his fifty years of practice were terms used and Dr. Hower gave evidence of these in his appearance and vigor and in his forceful and interesting address on the subject of "The Progress of Medicine in the Last 50 Years."

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#### ANNUAL LUNCHEON-MEETING OF NEW ENGLAND ALUMNI

The fourth annual luncheon-meeting of the New England Alumni was held on June 2, 1937 at the Hotel Bradford in Boston, in conjunction with the Annual Meeting of the Massachusetts Medical Society.

Arrangements were made by the following Boston committee of the Massachusetts alumni:

C. F. Berry (P. & S. 1910)

A. B. Shoemaker (U. of M. 1908)

Benjamin Parvey (B. M. C. 1907)

C. W. Finnerty (P. & S. 1913)—president of the Massachusetts alumni

Charles E. Gill (U. of M. 1927)—secretary-treasurer of the Massachusetts alumni

Doctor Shoemaker extended the greetings of the Boston committee and Doctor Finnerty presided, introducing the guest speaker, Doctor Charles E. Mongan, retiring president of the Massachusetts Medical Society. Doctors Finnerty and Gill were requested to serve until the next luncheon-meeting, meanwhile working out a plan for an informal organization more representative of the six New England states, rather than confining the elected officers to Massachusetts graduates.

There were sixty-eight in attendance, including two guests, distributed by States and schools as follows:

Baltimore Medical College.....	36
College of Physicians and Surgeons.....	19
University of Maryland Medical School.....	11
Massachusetts.....	51
Connecticut.....	0
Rhode Island.....	6
Maine.....	4
Vermont.....	3
New Hampshire.....	2

The list of alumni in New England was recently revised by the secretary-treasurer and the following findings reported to those at the meeting:

	<i>B. M. C.</i>	<i>P. &amp; S.</i>	<i>U. of M.</i>	<i>Total</i>
Massachusetts.....	110	57	40	207
Connecticut.....	35	42	50	127
Rhode Island.....	13	34	20	67
Maine.....	29	11	5	45
New Hampshire.....	22	2	2	26
Vermont.....	17	1	5	23
				<hr/> 495

The following alumni attended the luncheon-meeting:

Underwood, David G., Hingham, Mass., B. M. C. 1894  
 Robinson, Francis A., Worthington, Mass., B. M. C. 1894  
 Lightle, W. E., North Berwick, Maine, B. M. C. 1894  
 Chapman, B. A., Springfield, Vermont, B. M. C. 1895  
 Steuart, F. C., Manchester, N. H., B. M. C. 1895

- Morris, R. H., Everett, Mass., B. M. C. 1896  
Harris, Charles E., Hyannis, Mass., B. M. C. 1897  
Kazanjian, H. P., Watertown, Mass., B. M. C. 1898  
Fernald, Fred, Nottingham, N. H., B. M. C. 1900  
Tierney, Thomas F., Hudson, Massachusetts, B. M. C. 1901  
Alexander, T. B., Scituate, Mass., B. M. C. 1901  
LaRue, A. A., Worcester, Mass., B. M. C. 1901  
Chrystal, M. H., Leominster, Mass., B. M. C. 1901  
Perry, Ralph G., Wells River, Vermont, B. M. C. 1901  
Devlin, P. C., Lynn, Mass., B. M. C. 1902  
Edmunds, F. A., Woburn, Mass., B. M. C. 1903  
Vrooman, E. M., North Adams, Mass., B. M. C. 1903  
Killelea, E. V., Fitchburg, Mass., B. M. C. 1903  
Dugdale, Frederick, Portland, Maine, B. M. C. 1903  
McGinley, Charles, Lynn, Mass., B. M. C. 1904  
Sukeris, C. J., Boston, Mass., B. M. C. 1905  
Laserte, Charles J., Leominster, Mass., B. M. C. 1905  
Kelly, Harvey, Winthrop, Mass., B. M. C. 1906  
Parvey, Benjamin, Boston, Mass., B. M. C. 1907  
Calitri, Constant, Lawrence, Mass., B. M. C. 1907  
Beaulieu, E. J., Whitman, Mass., B. M. C. 1907  
Higgins, Martin A., Portsmouth, N. H., B. M. C. 1907  
O'Rourke, C. B., East Providence, R. I., B. M. C. 1907  
Mournighan, T. F., Providence, R. I., B. M. C. 1907  
Crimmins, Philip P., Rutland, Mass., B. M. C. 1907  
Wilkins, G. A., Revere, Mass., B. M. C. 1908  
Achor, R. C., Boston, Mass., B. M. C. 1908  
Upham, R. C., Biddeford, Maine, B. M. C. 1908  
MacNeil, C. S. J., Malden, Mass., B. M. C. 1909  
O'Rourke, P. I., Providence, R. I., B. M. C. 1909  
Thomas, Robert E. (Major, M. C.), Winthrop, Mass., B. M. C. 1913  
Smith, Robert M., West Warwick, R. I., P. & S. 1889  
Barre, Joseph A., Fall River, Mass., P. & S. 1892  
Walsh, C. J., Arlington, Mass., P. & S. 1892  
Howe, George J., Central Falls, R. I., P. & S. 1892  
Lewis, A. C., Fall River, Mass., P. & S. 1893  
Woodman, Daniel N., North Haven, Maine, P. & S. 1893  
St. George, Archibald, Fall River, Mass., P. & S. 1895  
Austin, J. C., Spencer, Mass., P. & S. 1896  
Kearney, J. H., Fitchburg, Mass., 1898  
Elliot, Alfred, Middleboro, Mass., P. & S. 1900  
Leonard, J. M., Fall River, Mass., P. & S. 1900  
Doyle, J. H., Fall River, Mass., P. & S. 1902  
Saltz, S. M., Boston, Mass., P. & S. 1904  
Trainor, J. A., Belmont, Mass., P. & S. 1905  
King, Nicholas J. H., Boston, Mass., P. & S. 1908  
Weller, J. H., Bridgewater, Mass., P. & S. 1909  
Berry, C. F., Boston, Mass., P. & S. 1910  
Froitzheim, William J., Boston, Mass. (Major, M. C.), P. & S. 1910  
Finnerty, C. W., Boston, Mass., P. & S. 1913

Limauro, L. H., Lynn, Mass., U. of M. 1906  
 Gordon, W. C., Providence, R. I., U. of M. 1907  
 Shoemaker, A. B., Boston, Mass., U. of M. 1908  
 Goodall, E. B., Boston, Mass., U. of M. 1908  
 Dovell, Chauncey E. (Major, M. C.), Winthrop, Mass., U. of M. 1914  
 Ruark, William T., Westfield, Mass., U. of M. 1915  
 Reynolds, Francis A., Athol, Mass., U. of M. 1921  
 Navarro, V. A., Medfield, Mass., U. of M. 1925  
 Gill, Charles E., Boston, Mass., U. of M. 1927  
 Arnett, Thomas M. (Lt. M. C.), Winthrop, Mass., U. of M. 1931  
 Leavitt, Abraham C., Cambridge, Mass., U. of M. 1934

CHARLES E. GILL (U. of M. 1927), *Secretary-treasurer*  
 Room 546, State House  
 Boston, Massachusetts

### ITEMS

Doctor William T. Ruark (U. of M. 1915) was recently appointed to the staff of the Westfield State Sanatorium at Westfield, Massachusetts. For several years he had been on the staff of the Iowa State Sanatorium, Oakdale, Iowa.

Doctor William E. McLellan (U. of M. 1914) has recently resigned from the staff of the Medfield State Hospital, Medfield, Massachusetts, in order to assume the post of medical advisor to the Railroad Retirement Board in Washington, D. C.

Doctor Joseph M. Ganey (P. & S. 1904) of New London, Connecticut, is a member of the Public Health Council of the Connecticut State Department of Health.

Doctor Charles E. Gill (U. of M. 1927) of Boston, Massachusetts, has been appointed state district health officer with the Massachusetts Department of Public Health, with headquarters at Room 546, State House, Boston, Mass. He has recently completed a year of study at the Harvard School of Public Health leading to the degree of Master in Public Health.

Doctor James F. Lynch (P. & S. 1913) of Hartford, Connecticut was recently elected director and re-elected president of the medical staff of St. Francis Hospital in that city.

While the University of Maryland has had no connection at anytime with the Maryland Medical College of Baltimore or with the Baltimore University School of Medicine, the Dean's office is constantly receiving requests for information concerning the Alumni of these schools. The Dean's office, therefore, would be glad if any catalogs of either of these schools or any information concerning these schools were forwarded to the Medical School office.



Doctors William S. Gardner, professor emeritus of gynecology and Dean J. M. H. Rowland attended a dinner in honor of Dr. H. V. Hower, P. & S., class of 1887, at the Elks Club, Bloomsburg, Pennsylvania, on May 7, 1937.

Dr. Raymond Hussey, Baltimore, Md., class of 1911, announces the opening of his office at 9 East Chase St., for the practice of internal medicine in the field of cardiac and pulmonary diseases.

Dr. Arthur M. Shipley, class of 1902, addressed the North Carolina State Medical Society at Winston-Salem on May 4, 1937. An alumni association of the University of Maryland was formed at the meeting with Dr. G. Carlyle Cooke as president, Dr. Marvin L. Slate as secretary and Dr. M. D. Bonner as treasurer.

Dr. C. Richard Ahroon, Jr., class of 1932, is located at Bloomington, Ill. He is attempting to confine his practice to internal medicine.

Dr. Thomas J. Coonan, Baltimore, Md., class of 1925, announces the removal of his office to 113 W. Monument St.

Dr. Stanley W. Matthews, class of 1921, a major in the medical corps of the United States Army is stationed at Fort Snelling, Minn.

Dr. James L. Gallagher, Buffalo, N. Y., B. M. C., class of 1904, has an article in the Bulletin of the Medical Society, County of Erie and Buffalo Academy of Medicine, 14: 12, 1937, entitled Compulsory Health Insurance. In the New York State Journal of Medicine, 37: 225, 1937, Dr. Gallagher tells the story of how the Buffalo doctors won their campaign for legible numbers on Buffalo's buildings. Our alumni might read either or both of these articles with profit.

Dr. Magnus Gregerson, professor of physiology has resigned to accept a similar chair at the College of Physicians and Surgeons, Columbia University, New York City.

Dr. A. M. Shipley, Baltimore, Md., class of 1902, read a paper at the annual meeting of the American Medical Association, Atlantic City, N. J., June 7-11, 1937, entitled Present Day Status of Surgery of the Heart and Pericardium; Dr. Emil Novak, Baltimore, Md., B. M. C., class of 1904, on Disgerminoma of the Ovary, and Dr. Ernest Howard Gaither, Baltimore, Md., B. M. C., class of 1905 on Gastritis, etc.

Dr. Fred W. Rankin, Lexington, Ky., class of 1909, is a member of the Council on Medical Education and Hospitals. He read a paper in the general scientific session on the Modern Trends in the Treatment of the Rectum and Rectosigmoid.

Dr. Lloyd Noland, Fairfield, Ala., B. M. C., class of 1903, is a member of the judicial council of the American Medical Association.

Dr. Alfred T. Gundry, Catonsville, Md., P. & S., class of 1894, is a delegate from the Medical and Chirurgical Faculty of Maryland to the

American Medical Association; Dr. Fred W. Rankin, Lexington, Ky., class of 1909, represents the section on Surgery, General and Abdominal, and Dr. Charles W. Roberts, Atlanta, Ga., class of 1906, the State of Georgia.

Dr. Louis A. Buie, Rochester, Minn., class of 1915, is chairman of the section of Gastro-Enterology and Proctology of the American Medical Association.

Rear Admiral Percival S. Rossiter, has been reappointed surgeon general of the United States Navy, following the completion of four years in office. Dr. Rossiter will reach the statutory age for retirement on November 30, 1938. He graduated from the University of Maryland in 1895, and has been associated with the service since 1903. He is now president of the Association of Military Surgeons of the United States and Canada.

#### CORRESPONDENCE

June 1st, 1937.

Dr. Max Trubek,  
121 E. 60th Street,  
New York.

Mrs. Ruth Lee Briscoe, Librarian,  
University of Maryland School of Medicine,  
Baltimore, Md.

Dear Mrs. Briscoe:

Have always wished to express my appreciation of your many kindnesses to me as a medical student (Class 1926).

Enclosed check Fifty Dollars given in memory of my father, Morris Trubek. His particular interest was organic chemistry, but use the check for whatever purpose connected with the Library you desire

With best wishes,

Sincerely,

(Signed) Max Trubek.

*A communication from THOMAS FELL, Ph.D., LL.D., D.C.L.,  
Provost of the University of Maryland, 1913-1920*

May 30th, 1937.

Thomas Fell, LL.D.,  
"Sherborne",  
Markham, Virginia.

My dear Mrs. Briscoe:

My son Edgar made me a flying visit on Friday last, and showed me a letter he had recently received from you, which revived old memories

connected with the University of Maryland, in which your pleasant and courteous personality beams as a radiant star.

Well, I am still above ground in spite of the eighty-seven years which have passed over my head, and can sleep, read, and write, and move about quietly.

Edgar and his family usually spend the summer with me, but will not arrive until the 21st of June. How would you like to spend a few days with me here before they come? I have a trained nurse who looks after me and helps me to run my household. She would be glad to see you.

I felt the death of Doctor Randolph Winslow, who was a warm friend of mine, very keenly.

With kindest regards,  
Very sincerely yours,

Thomas Fell.

#### WEDDING

Dr. Hubert T. Gurley, Baltimore, Md., a native of High Point, N. C., class of 1925, was married on May 8, 1937, to Miss Ruth Oak-jones of 2805 Carroll Ave., Washington Park. Dr. Gurley is automobile coroner of Baltimore. He served his internship at the West Baltimore General Hospital. He is a graduate of the arts and science school of the University of North Carolina.

## DEATHS

- Ashcraft, Elwin H.**, Coudersport, Pa.; P. & S., class of 1881; for many years a member of the state board of health, county coroner and medical inspector; aged 82; died, April 12, 1937.
- Bernstein, Israel Isaac**, New York, N. Y.; B. M. C., class of 1906; aged 58; died, March 9, 1937.
- Blair, Frederick Lewis**, Providence, R. I.; class of 1911; veteran of the Spanish-American and World Wars; aged 59; died, April 24, 1937.
- Bolton, Harris Alonzo**, Warm Springs, Mont.; P. & S., class of 1910; member of the American Psychiatric Association; medical superintendent of the Montana State Hospital; aged 53; died, March 17, 1937, of pneumonia.
- Bond, Elizabeth B.**, Baltimore Md.; executive secretary of the Medical Alumni Association; aged 33; died, April 26, 1937, after a short illness. She was the daughter of Brooke and Sadie P. Bond, of Port Republic, Calvert County, Md. During her seven years of service with us she had won the regard and affection of all who came into intimate contact with her. She was a loyal and efficient employee. We shall miss her very much. At a meeting of the Board of Directors of the Alumni Association of the University of Maryland School of Medicine held on May 4th, 1937, the following preamble and resolutions were unanimously adopted.

Whereas, Miss Elizabeth Bond was connected with the Alumni Association for seven years as Executive Secretary, performing her duties with capability, skill and cheerfulness and whereas, the splendid work done by Miss Bond, her devotion to duty and great service to the Association have been gratefully appreciated and highly valued by the Directors of the Alumni Association who deeply deplore her loss.

Therefore, be it resolved that in the early death of Miss Elizabeth Bond, we recognize that the Alumni Association has suffered the loss of one of its most efficient and reliable associates and the Board of Directors extend to the Father and Mother of Miss Bond heart-felt sympathy and condolences.

That a copy of these resolutions shall be inscribed on the minutes of the Association as a permanent record.

Francis J. Kirby, M.D.  
President.

- Bruch, Elmer Clinton**, Bethlehem, Pa.; B. M. C., class of 1891, also Jefferson Medical College of Philadelphia (1892); aged 67; died, April 16, 1937.

- Charles, Frederick Henry**, Cumberland, Md.; class of 1886; aged 75; died, March 19, 1937, of arterial hypertension and myocarditis.
- Cooke, Stafford G.**, Yorktown, Va.; P. & S., class of 1886; for many years supervisor of York County, and member of the school board; aged 76; died, March 2, 1937.
- Copeland, James Edward**, Round Hill, Va.; Washington University School of Medicine, class of 1876; Confederate veteran; aged 91; died, January 17, 1937.
- Darrow, Frederick L.**, Brooklyn, N. Y.; class of 1910; served during the World War; aged 59; died, January 12, 1937, of cerebral hemorrhage.
- Dudley, Morton Leonard**, Roanoke, Va.; P. & S., class of 1905; attached to the relief and pension department of the Norfolk and Western Railway; aged 52; died, December 17, 1936.
- Ebert, John William**, Towson, Md.; class of 1912; aged 49; died, February 2, 1937, of coronary thrombosis.
- Folk, Robert Hamilton**, Belton, S. C.; class of 1916; served during the World War; aged 48; died, January 17, 1937, of bronchopneumonia and myocarditis.
- Free, George B. M.**, York, Pa.; class of 1883; also U. of Pennsylvania School of Medicine (1884); aged 75; died, January 23, 1937, of pneumonia.
- Fuller, Andrew Howard**, West Upton, Mass.; B. M. C., class of 1906; aged 69; died, March 13, 1937, of injuries received in an automobile accident.
- Garred, Herbert William David**, Charleston, W. Va.; class of 1928; aged 34; died, March 12, 1937, of edema of the brain.
- Grantham, James Mullins**, Tampa, Fla.; B. M. C., class of 1898; formerly health officer of Tampa; aged 63; died, February 26, 1937, of cerebral hemorrhage.
- Hauver, Roy Verner**, Middletown, Md.; B. M. C., class of 1904; aged 62; died, January 18, 1937, of coronary thrombosis.
- Higgins, Thomas F.**, Elizabeth, N. J.; P. & S., class of 1908; for many years city physician; aged 57; died, March 24, 1937, of pneumonia.
- Hilgartner, Henry Louis**, Austin, Texas; class of 1889; aged 68, died, June 9, 1937, at Atlantic City, N. J., of cardiac disease. June 8th, Dr. Hilgartner had read a paper before the ophthalmological section of the American Medical Association. He was born in Baltimore and studied medicine in Baltimore, New York and Vienna. In 1891, he settled in Austin, Texas. During the World War he served as a consultant to the United States Army.

He was a member of the American and Texas Medical Associations, the Texas Ophthalmological and Oto-Laryngological Society, The American College of Surgeons and the American Academy of Ophthalmology. He received a B.S. degree from the University of Texas in 1896.

- Hodges, James Harrison**, Gainesville, Fla.; P. & S., class of 1888; past president of the Florida Medical Association; formerly member of the state board of medical examiners; at one time superintendent of the Florida Farm Colony for Epileptic and Feebleminded; aged 70; died, February 3, 1937.
- Hollis, Mark D.**, Savannah, Ga.; B. M. C., class of 1898; acting assistant surgeon, U. S. Public Health Service on duty at the Immigration Station from November, 1913 to August, 1936 and retired for disability in September, 1936; served at many stations of the service and as medical officer in charge of the U. S. Quarantine Station, Savannah from August, 1930 to 1936; aged 62; died, February 15, 1937, of coronary thrombosis.
- Hoover, Henry R.**, Wilson, N. C.; B. M. C., class of 1891; aged 76; died, March 16, 1937, of a self-inflicted bullet wound.
- Keylor, Howard R.**, Walla Walla, Washington; P. & S., class of 1882; vice president Washington State Medical Association (1895) formerly member of the state board of medical examiners, acting as its secretary for many years; overseer of Whitman College; aged 76; died, March 27, 1937.
- Koiner, Warren Worth**, Beckley, W. Va.; P. & S., class of 1906; served during the World War; aged 57; died, February 22, 1937, of pneumonia.
- Leyko, Julius Joseph**, Baltimore, Md., class of 1927; aged 33, died, June 8, 1937. He was a graduate of Loyola High School and College, Baltimore. He was a member of the Phi Rho Sigma, international medical fraternity and a fellow of the American College of Surgeons.
- Linthicum, John W.**, Baltimore, Md., class of 1884; aged 76; died, April 18, 1937.
- Maphis, Samuel W.**, Warrenton, Va.; class of 1893; member of the school board, for many years a member of the state board of medical examiners; aged 69; died, January 26, 1937, of coronary disease.
- Mather, John Adams**, Greenfield, Mass.; B. M. C., class of 1902; member of the New England Roentgen Ray Society; served during the World War; aged 60; died, January 16, 1937, of angina pectoris and arteriosclerosis.

- Miller, Warren Daniel**, Hagerstown, Md.; P. & S., class of 1907; past president of the Washington County Medical Society; aged 56; died, January 16, 1937, of carcinoma of the transverse colon, perforation of the colon and peritonitis.
- Mooney, Charles J.**, Washington, D. C.; P. & S., class of 1904; aged 62; died, February 3, 1937, of cirrhosis of the liver and hypertension.
- O'Neill, John E.**, Henryton, Md.; class of 1910; medical director and superintendent of the Maryland Tuberculosis Sanatorium; aged 62; died, December 31, 1936, of uremia and coronary thrombosis.
- Owings, Edward R.**, Baltimore, Md., class of 1889, aged 68; died, February 15, 1937, of coronary thrombosis.
- Parker, Charles S.**, Baltimore, Md.; P. & S., class of 1881; aged 79; died, January 25, 1937, of chronic myocarditis.
- Perry, Orr L.**, Elkins, W. Va.; P. & S., class of 1891; past president of the Barbour-Randolph-Tucker County Medical Society; county public school physician; formerly city health officer; aged 75; died, February 21, 1937, of influenza.
- Philbrick, Warren V.**, Worcester, Mass.; P. & S., class of 1885; aged 87; died, March 31, 1937, of injuries received when he was struck by an automobile.
- Quinn, Walter C.**, Brockway, Pa.; P. & S., class of 1884; aged 76; died, January 25, 1937, of cardiac disease.
- Salmon, Edward H.**, Jersey City, N. J.; B. M. C., class of 1907; for many years chief of the division of communicable diseases of the city health department; aged 61; died, February 28, 1937, of epithelioma.
- Scannell, Joseph William**, Lewiston, Me.; class of 1906; formerly fire commissioner; chairman of the cancer committee of the Maine Medical Association; aged 53; died, January 16, 1937, of cardiac disease.
- Schmied, James D.**, New Martinsville, W. Va.; P. & S., class of 1892; formerly mayor; served during the World War; aged 67; died, February 24, 1937, of cerebral hemorrhage.
- Smith, Reginald Knight**, San Francisco, Calif.; P. & S., class of 1892; aged 67; died, April 18, 1937, of coronary occlusion. He was born in Newberg, Ala., September 22, 1869. After graduating, he served in the medical corps of the U. S. Navy, where he was a lieutenant commander during the Spanish-American War. His early experience was in the Emanuel Sisterhood Polyclinic and the Fruit and Flower Mission, then in the Mount Zion

obstetrical clinic. He was instructor in obstetrics at Cooper Medical College (1908-1909) and later assistant clinical professor of obstetrics at the University of California Medical School. Dr. Smith was a member of the Pacific Coast Society of Obstetrics and Gynecology and past president of the San Francisco County Medical Society and of the California Academy of Medicine.

**Snyder, Gardiner F.**, Detroit, Mich.; B. M. C., class of 1893; aged 73; died, February 27, 1937, of cardiac disease.

**Spurrer, Harry G.**, Brookeville, Md.; class of 1889; aged 70; died, February 12, 1937, of coronary thrombosis.

**Stokes, James Ernest**, Salisbury, N. C.; class of 1892; member of the Southern Surgical Association and its vice president in 1917; fellow of the American College of Surgeons; served during the World War; aged 64; died, February 1, 1937, of angina pectoris.

**Uffelman, Harry W.**, York, Pa.; P. & S., class of 1907; aged 53; was found dead of bullet wounds on the desert outside of Bisbee, Ariz., February 5, 1937.

**Walker, George**, Baltimore, Md.; class of 1888; fellow of the American College of Surgeons; assistant in the outpatient surgical department (1898-1900), chief of clinic (1900-1902), instructor in surgery (1902-1905) and later associate in surgery, Johns Hopkins University School of Medicine; served during the World War in France, as urologist in chief to the American Army; in 1922 awarded the distinguished service medal; in 1921, was given its LL.D. degree by the University of South Carolina; in 1934, was appointed chairman of the medical advisory board of the Baltimore City Hospitals; aged 67; died, March 31, 1937, of carcinoma of the prostate gland. Dr. Walker was born in South Carolina July 27, 1869, the son of William Millen and Mary Ellen Hudson Walker. He attended South Carolina College at Columbia, S. C., and came to the University of Maryland Medical School, where he took his degree in medicine in 1889. In 1921, his alma mater in South Carolina bestowed on him an honorary doctor of laws degree. After his graduation from Maryland, Dr. Walker returned to his birthplace, and six years in general practice followed. He then returned to Baltimore, and in 1895 and 1896 was an interne in surgery at the Johns Hopkins Hospital. He decided to further his studies abroad, and for a year and a half worked at the universities of Breslau and Leipzig in Germany. He spent five months at



the University of Berlin in 1907, engaged in similar studies. Returning to Baltimore in 1898, he was made an assistant in surgery in the out-patient department of the Hopkins. Two years afterward he was made head of the department and soon he was instructor, then an associate in surgery at the university. Dr. Walker's introduction to public affairs came during the administration of Governor Goldsborough in 1913, when he was made chairman of the Maryland State Vice Commission. When the United States entered the World War, Dr. Walker was called to the colors, and in June of 1917, landed in France with the Johns Hopkins Base Hospital Unit. He had the rank of major. Dr. Walker was mustered out of the army with the rank of colonel. He was cited in France and in 1922 was awarded the Distinguished Service Medal at Third Corps Area headquarters for his war work. After the armistice he was given the post of chief urologist to the American Army. After spending some time in England Dr. Walker returned to the United States in September, 1919, with a record of twenty-seven months' continuous foreign service. Back in America, he was made a member of the Supervisors of City Charities, which recently became the City Board of Welfare. For years he was chairman of the special committee appointed to oversee the City Hospitals. Many things interested Dr. Walker. Chief among his recent interests was a move he founded for better nursing in Maryland. Violently opposed by nurses, doctors and hospitals alike, Dr. Walker nevertheless had introduced at the 1935 session of the Legislature a bill which would have forced nurses to have a college education, would have placed nursing under State supervision and made small hospitals discontinue their nursing schools. Dr. Walker was tall, quick and vigorous. He derived relaxation from his outside interests. Humorous, witty and the possessor of a charming manner, he was a good raconteur but a better listener.

Speaking editorially, The Sun, Baltimore, April 2, 1937, contains the following comment:

In the death of Dr. George Walker, Baltimore loses an adopted son whose tireless labors for the benefit of the city have for many years far outranked the contributions of most of our natives. It is difficult to believe that in Baltimore's whole roster there is one other who excelled him in public spirit and in public service, in unrelaxing vigilance over the welfare of the city's wards, and in the extraordinary modesty which made public recognition of his virtues during his lifetime positively hateful to him.

He won international acclaim for his two-year work in the uniform of the

Army Medical Corps (in that field he was more famous out of Baltimore than in it), but, unlike most of 1917's civilian soldiers, he found war's activities very like those of peace. For his whole life was one of war, against disease and crime and ignorance and negligence and lethargy. He was Civic Duty personified as one rarely sees it in any community.

For years Dr. Walker's was the most insistent voice on reform work in the City Hospitals, and a very large part of those institutions' remarkable betterment in the past fourteen years is directly traceable to him. One thinks of the additions in physical buildings providing more room for the poor, of proper medical and surgical and nursing attention for the sick and the miserable, of proper food for all, of protection of the technical staff from the blundering interference of petty politicians, of the building up of a program for the too-long-delayed scientific study of chronic ailments.

Apart from the City Hospitals, one can mention the closer prospect of placing all our remaining insane in the better-equipped State institutions, rather than keeping them longer in the city's custody. One can mention the expectation of a city psychopathic ward which holds rich promise both of a sounder local administration of justice and of very considerable benefit to hapless individuals tottering on the brink of lunacy. For these and other reforms (which a coming generation will think of as obvious but which experience shows to be the fruit only of tremendous work against popular and political inertia) it is fair to say that George Walker is chiefly responsible.

At the funeral today, in the shadow of the Monument and a few rods from the old-fashioned quarters he occupied for so many years, there will no doubt be many warm friends grieving that so useful a citizen and so friendly a man is gone. But, unseen, there will be the spirits of many, many more than could push their way in bodily form into Mount Vernon Church. There will be the wraiths of soldiers of the A. E. F., and of other armies as well, for Dr. Walker's war-time industry was of aid to all. There will be the souls of unnumbered poor and sick and friendless, to whom this man was a friend who did not stop with pitying them, but saw that a cold and indifferent community lost its indifference and gave those unfortunates treatment which often was as good as the wealthiest could buy.

There will be, one dares to hope, the spirits of some not yet dead, not yet even born—those whose lives will be free from poignant suffering because George Walker spent most of his life in seeking ways to prevent such anguish—and himself died of the dreadful malady he fought so hard to cure in others. Time will show that his contributions to that end did not end with his enforced retirement from surgical practice and research.

and The Evening Sun, Baltimore, April 1, 1937, has the annexed editorial:

Dr. George Walker, who died yesterday, may be forgotten quickly by the world in general, but certainly he will be remembered while their lives last by all who came into any sort of personal contact with him. The city of Baltimore, which for years has harbored both extraordinary medical men and picturesque characters, has never seen the two classes in more striking combination. He was preëminently what the Germans call a *Kopf*—a salient and important personage, a genuine original, his own man. He did an immense

amount of patient work in his time, and much of it was work that will be fruitful hereafter.

There were two distinct George Walkers and sometimes the contrast between them was astonishing and even disconcerting. One of them was a bland and kindly fellow, tenderly careful of his patients, full of fatherly concern for hard-worked nurses and a pleasant companion at the dinner table. The other was a bellicose Carolinian who did not hesitate, on occasion, to resort to fists or even to firearms in the support of what he thought to be just and right.

The tales of his doings in his various guises—as Galahad, as Bayard, as perennial rebel—would make a charming and stimulating book. It is to be hoped that his medical colleagues, all of whom loved him and were delighted by him, will collaborate on an adequate memoir of him. He was a most unusual man and admirable far beyond the common.

**Wallace, Gustavus M.**, Falmouth, Va.; class of 1871; state senator; aged 88; died, January 28, 1937, of senility.

**Weaver, Jacob J., Jr.**, Uniontown, Md., class of 1869; aged 89; died, April 10, 1937. For the past twenty-five years Dr. Weaver was president of the Mutual Fire Insurance Company of Carroll County. He was also president of the Carroll County Savings Bank of Uniontown and chairman of the board of directors of the First National Bank at Westminster. He had been president of the latter institution for sixteen years. Since his retirement from the practice of medicine in 1889, Dr. Weaver had been spending his winters at the home of his daughter in Washington, D. C. He was also a graduate of Pennsylvania College, Gettysburg, and a member of the Sons of the Revolution and of the Maryland Historical Society.

**Wertz, Irvin M.**, Hagerstown, Md.; B. M. C., class of 1903; mayor of Hagerstown; aged 64; died, February 23, 1937.

**Wess, Bernard Joseph**, Baltimore, Md.; B. M. C., class of 1905; aged 54; died, January 9, 1937, of coronary thrombosis.

**Whittle, William Henry**, New Orleans, La.; P. & S., class of 1882; aged 78; died, February 15, 1937, of a fractured femur consecutive to a fall.

**Wilson, William Welford**, Aurora, Ill.; class of 1921; aged 42; died, May 26, 1937.

**Yerdon, Charles Francis**, Brooklyn, N. Y.; B. M. C., class of 1897; served during the World War; aged 70; died, March 5, 1937.

**Winslow, John Randolph**, Baltimore, Md.; class of 1888; aged 71; died, June 26, 1937, of chronic myocarditis and generalized arteriosclerosis.

**Ziegler, Charles B.**, Baltimore, Md.; Washington University School of Medicine, class of 1876; aged 82; died, May 5, 1937.



# BULLETIN

OF THE

## SCHOOL OF MEDICINE

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UNIVERSITY OF MARYLAND

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Vol. 22

OCTOBER, 1937

No. 2

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### THE PHYSICIAN AS A WITNESS\*

RICHARD T. SHACKELFORD, M.D.

BALTIMORE, MD.

The ever-broadening scope of industrial and other forms of insurance plus the frightening increase of traffic casualties are bringing the doctor more and more onto the witness stand. To these causes may be added the increasing court consciousness of the public at large, always alert to capitalize on the most obscure point an ingenious lawyer can devise, and willing to gamble a small loss in case of failure, against a large gain should the suit be successful. This trend, I fear, will continue as long as the possible profits so greatly exceed the possible loss. Indeed, who among us would not risk half a guinea upon the Irish Sweepstakes, did the opportunity but present itself? This in spite of the most unfavorable odds is far greater, in fact, than those relating to a favorable jury verdict.

The purpose of this paper, however, is not to rake the heavens with our philosophic pole but to present certain facts, emphasize known abuses and timidly offer some suggestions to those who have not specialized in forensic medicine. The timidity mentioned above is not borne from a lack of conviction, but due to the inexperience of one who has not been thoroughly tested in the subject at hand.

As a result of the above factors, physicians who had never appeared in court are now being summoned; those who made only occasional visits are finding themselves more frequently in the witness chair, and those who have established a reputation in this particular field are enjoying a boom. Indeed, it has been estimated that medical witnesses appear in 50 per cent of all the cases that come to court.

\* Read before the Semiannual meeting of the Medical and Chirurgical Faculty, April 28, 1937.

The average physician views this contingency with great distaste, and often goes to ridiculous extremes in his efforts to avoid it. Phillip Work states that this is due largely to two factors, first, the doctor's lack of awareness of his rights on the stand and, second, to the uneasy feeling that he may be used as a pawn to attain an unsavory result which will reflect discredit upon the witness. Not infrequently the doctor feels that he has been made a monkey of and in many such instances the events in the courtroom have confirmed such an impression. In these cases the physician by his own conduct or words has contributed his full share to that unique biological transmutation.

Other causes are present, I feel sure, for this reluctance on the part of many of our leading men. One of the foremost, I believe, is the offensive reputation that suits at law, including participants in the suit, have acquired. Another of practical importance is the tremendous loss of time from one's practice entailed in such an entanglement. All of the above are unnecessary and, with this in mind, let us consider for a moment courts and the law in general.

The courts are agents of the community, directed and empowered to administer justice to the best of their ability. They were not established as arenas for the accommodation of individuals, legal or lay, who wished merely to strut their erudition or tilt verbosely *ad nauseam*. The courts were further empowered to utilize whatever means or individuals were necessary to arrive at a correct conclusion, and as a corollary it is the duty of each citizen of the community to cooperate with its judicial agents.

At present there is a widespread comparison by the laity between suits at law and a prize fight. This group believes that in court the witnesses and attorneys for each side should be violently partisan, twisting every remote possibility in their favor and stretching veracity to just within the penalty point; that by so doing, the exaggerations will neutralize each other and justice be accomplished. This, I believe, is contrary to the theory of law. Facts and honest opinions alone should be stated regardless of their effect upon one's employer. Such, unfortunately, seems difficult as is so often demonstrated by evidence for disability in personal injury cases, and has given rise to many of the complaints about medical testimony today.

Now let us consider the more specific rights and duties of the doctor as a witness, particularly those which apply in the state of Maryland.

All medical witnesses fall into one of two classes, the ordinary and the expert. An ordinary witness is one who testifies as to the facts made known to him by one of his senses, while an expert witness is one

who has special knowledge upon a subject and is recognized as such. The vast majority of physicians are utilized as ordinary witnesses, testifying to such medical facts as that the leg was broken, the patient delirious, etc. Relatively few have cases referred to them as experts on some particular phase of medicine. The law recognizes no difference in the financial value of testimony by the doctor or by the ditch digger; hence he is legally entitled only to the statutory fee of one dollar per day credited to all ordinary witnesses, unless previously or subsequently other arrangements are made. In one state it has been ruled illegal to receive a higher fee. Furthermore, if subpoenaed he is forced to appear, and if served with a special subpoena *Duces Tecum* he is obligated to bring his records with him. He cannot, however, be forced to prepare himself upon the subject without arrangements for satisfactory remuneration.

The expert, on the other hand, unless he has also been one of the attending physicians, is free to refuse his appearance even though subpoenaed. Accordingly he usually reaches a financial agreement before his turn on the stand and, should this not have been done, he is entitled to a fair fee for his services.

The question is often asked, "When called upon as an ordinary witness, what rights do I have to refuse giving expert opinions without further remuneration?" The answer is simple. "None." Once on the stand, in this State, a witness must answer to the extent of his ability every question considered relevant by the court. Immediately it will be asked, "Why should a lawyer engage an expert or agree to pay an ordinary witness more than the statutory fee?" The answer here is not as simple. Apparently it is worth a small sum to have a friendly rather than an unfriendly occupant of the chair; however, it would be within an attorney's right to mulct a physician on the stand of as much opinion evidence as that person is capable of, without offering additional remuneration. The obvious suggestion to the doctor is to arrange beforehand, if possible, the amount of his fee. At this point it seems pertinent to me to comment upon this inequitable state of affairs. Medical testimony by its very nature is to some degree, at least, expert testimony. A broken bone may be suspected by a layman but is usually confirmed by the doctor with his special knowledge of that condition. Furthermore, due to the sphere of his activities the practitioner is repeatedly summoned to court more often, I believe, than any other business or professional group unrelated to law. Thus he contributes more than his share of time to the cause of justice. The better type of legal firms recognize this inequity and, in practice, reward physicians additionally for opinion evidence.

Such being the case it seems time that this Society as a body present legislation to be enacted whereby attending physicians will have legal rights to a reasonable fee for their testimony.

There is, apparently, much misunderstanding in regard to a subpoena. This is a document which cannot be disregarded and legally takes precedence over professional visits, operations, etc., as has been recently demonstrated to the discomfiture and financial loss suffered by one of our profession. Practically, however, the courts have recognized to some extent the value of time to the physician and they have not been unreasonable in permitting witnesses to continue their daily activities until such time as their actual presence is required. Then a prompt appearance or unequivocal cause for delay have not met with reproof. However, one must remember that this depends upon the good nature of the court and not upon the rights of the medical witness. Quite recently I heard a doctor state that he had never responded to a summons and nothing had come of it. There is no reason to doubt his veracity but streaks of luck usually have an ending.

It has been called to my attention by a member of the bench that personal physicians of a lay witness who has been subpoenaed often write a note stating that that person for reasons of health is unable to appear at the trial, when in reality he suffers only from a minor ailment compatible with normal activities. One can readily understand the awkward position of a family physician in such instances when he is pressed for what appears to be a small favor by a patient of years' standing, but such a procedure delays the trial, increases the costs to the public and, if not justifiable, constitutes perjury.

Once having arrived in the courtroom the doctor's greatest difficulty begins. As pointed out above, his job is to give impartial testimony, factual or expert, as the case may be. He is supposed to be non-partisan in an atmosphere charged with contention and partisanship. He is expected to favor neither one side nor the other, yet one party is paying him while success for the other may mean insolvency for his employer. In spite of these tremendous handicaps the bulk of medical testimony is honest and factual. As proof I quote in part a letter from one of the members of the bench, as follows, "After many years' experience at the bar and especially on the bench, except for a few rank individuals, the medical witnesses by and large have the confidence of courts and jurors." Such a remark, under the circumstances stated above, is a great tribute to the integrity of our profession as a whole and I doubt if more could be said of any other such cosmopolitan group. However, there have been and are exceptions. One bad egg is more noticeable than a dozen sound ones and has



spread an unpleasant aroma over the field of forensic medicine. This was pointed out by Doctor Dean Lewis before the House of Delegates of the American Medical Association when he was president of that Society in 1934. The delegates on that occasion recommended that the State Societies take steps to erase this stigma in their localities. With this in mind as well as cases in which honest medical testimony is at wide variance, it is recommended by the Medical and Chirurgical Faculty that the Supreme Bench of Baltimore make a ruling of court procedure empowering a judge to call upon a panel of specialists supplied by the Faculty for impartial expert testimony; the fees should be moderate and added to the court costs. This witness will then be a totally disinterested party, uninfluenced by financial or other inducement and will, by the method of his selection, rank high in his chosen field. Such testimony should carry more weight with a jury than that from any of the partisan experts where prejudice is a great factor. Again, should sincere disagreement arise the impartial appointee would supply a third and valuable opinion. There are further benefits to be derived from such a plan. At present the law is very liberal as to who may qualify as an expert. A jury or a justice may be a good judge of law but a poor judge of doctors. Under the above scheme the Medical Society will appoint a panel of experts who *are* experts, leaders in their specialty. By such means it is hoped to make obsolete the following paragraph found in Brothers Book on Medical Jurisprudence: "At the present time the force of expert testimony is greatly weakened by a prevailing conviction that the expert is a special pleader who presents at best only one side of the case and whose opinion is regulated according to the size and source of his fee."

This same text enumerates the following suggestions for the comportment of a medical witness which we might review with additional comments in regard to local conditions. The first is that the doctor should be a witness and not an advocate. Secondly, that he should have, if possible, prearranged for a suitable fee. This sum should not be upon a contingent basis, although practically, as mentioned before, the financial status of the employer may dictate such an arrangement. There can be no objection under such circumstances if the charge does not vary with the amount of the settlement. Third, the witness should review the facts of the case. These may be culled from his records, with the court's permission, while on the stand. Fourth, he should review the standard authors on the subject. Here it is well to remember that books are not admitted as final authorities on the particular case involved. Fifth, he should be dignified and serious, omitting facetiousness, as much hangs on the

verdict. Sixth, that he should use a simple language is a most important point. Many complaints have been made that some doctors cloud their testimony with a blast of polysyllabic, technical terms which would befuddle the most educated layman and which produce an adenoid facies upon Tom, Dick and Harry of the jury. Such a display is wasted as it is not understood. The seventh suggestion is that one should not qualify as an expert out of his field. The eighth is that answers should be directly to the questions and without embellishment, more crudely expressed by the slogan, "stand up, speak up, shut up." On this point, however, it is well to remember the oath to tell the truth, the *whole* truth and nothing but the truth, for a question may be framed in such a way that an unexplained answer may give an erroneous impression. Under such circumstances an appeal to the court for permission to clarify your reply will usually be granted. While on this subject it might be well to mention that in our State no privileged communication exists as far as the physician is concerned. Curiously enough Maryland recognizes the relations between husband and wife, lawyer and client as privileged, but not so those of doctor and patient. This means that whatever personal question is asked a practitioner about his patient, if it is relevant to the case at hand it must be answered regardless of the violation of confidence. The whimsy of the law which distinguishes such relationships is difficult to understand, but I am here to express facts and not opinions.

Before leaving the answering of questions, a word of warning should be sounded about so-called double questions. If two or more queries are made in one sentence, it is the right of a witness to break them down into separate entities and give an answer to each. It may also be of some comfort to assure you that any statement made as a witness cannot be used as grounds for a future libel suit against you. Brothers' ninth rule is too often neglected. This states that when in doubt a witness should say that he does not know, or if his opinion is a personal one not fully substantiated by facts or authority, he should state it only as his opinion, admitting the possibility that others might differ. The witness who states all the answers as incontrovertible reminds one acutely of Irvin Cobb's definition of egotism, which he describes as the anesthetic which God gave us to overcome the pain of being such damned fools.

The picture I have painted of forensic medicine has not been a bright one. The rights of medical witnesses have been found to be minimal and the obligations maximal. To add further to its somberness is the background of distrust in which medical testimony is held. In the twenty references, lay and medical, which I reviewed in the prep-

aration of this paper it was severely criticized. Undoubtedly it does not and will not attract our ablest men. However, it is a part of medicine which, like taxes, is here to stay and, I fear, to increase, touching all of us at one time or another. Such being the case is it not wiser that we give it some thought and correct our share of its abuses?

You will ask, "What can be done that does not smack of reform, a word which has become so obnoxious?" Your legal committee under the able chairmanship of Doctor Shipley and later of Doctor Bernheim has answered this with six carefully considered suggestions which I will abstract at the risk of repetition. They are:

1. The above mentioned suggestion for impartial expert witnesses.
2. Establishment of a committee to cooperate with the Bar Association in ferreting out medicolegal abuses, both legal and lay.
3. The teaching of ethics in medical schools.
4. Discussion of ethics at hospital staff meetings.
5. Discipline of the violators by the Society.
6. Discipline of the violators by hospitals and medical schools.

These have all met the approval of your governing body and the necessary machinery has been established. They are sound, conservative proposals, fair to all who play fairly and aimed to protect the reputations of medical men as a whole. Furthermore, books have been written evaluating varying degrees of disability, physical and mental, to serve as standards upon which the occasional witness may base his testimony. These are to be found in your library. One might also ask if our present coroner system is meeting the needs of modern civilization. Might not it be wiser to delegate this important work to medical examiners who specialize in this subject and have no outside interests?

You may ask, "What good will these things accomplish without correction of the obvious legal abuses now prevalent?" The question is a pertinent one, but my reading of lay articles indicates that the Bar Associations are likewise aware of their deficiencies on this score and that interest is being aroused to correct them. Mr. Justice Cardoza wrote, "The inn that shelters for the night is not the journey's end. The law, like the traveler, must be ready for the morrow. It must have a principle of growth." If both professions are working for the same end some good must result, and it is our desire to pull our own weight in the boat.

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# MASSIVE COLLAPSE OF THE LUNGS\*

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Massive collapse of the lungs and massive atelectasis are the terms most frequently used to describe a previously expanded lung or portion of a lung which has collapsed and has resumed a state of airlessness. This definition is purposely made to exclude fetal atelectasis, in which expansion has never occurred. Since massive atelectasis is a relatively common condition and since the diagnosis is frequently overlooked, it was felt that a review of the subject would be of interest.

## ETIOLOGY

Complete obstruction to a main bronchus with normal pulmonary circulation is essentially the cause of all cases of massive collapse. According to Jackson (1) this obstruction must be one of two types: a stop valve type, with no air getting in or out; or a check valve type preventing inflow but not outflow. In a stop valve mechanism gases trapped below the point of occlusion are absorbed slowly and atelectasis occurs after several hours. In a check valve mechanism each expiration forces out a fraction of the trapped gases and atelectasis occurs much more rapidly. No collapse occurs when a bronchus is not completely obstructed. Adams and Livingstone (2) working with dogs have shown that complete occlusion of one of the smaller bronchi does not cause an atelectasis of the corresponding lobule, a fact explained by the presence of collateral communications between the smaller radicles of the pulmonary tree. Obviously, a normal pulmonary circulation must be maintained to assure the absorption of the trapped gases and the production of airlessness.

Pathological conditions causing bronchial occlusion are usually divided into three groups: those originating outside of the bronchial wall; those originating in the bronchial wall and those originating in the lumen. Obstructing the bronchus from without are aneurisms of the thoracic aorta, mediastinal neoplasms, tuberculous glands and occasionally pericardial effusions. Causative lesions in the bronchial wall are bronchogenic carcinomata, pedunculated fibromata, tuberculous fibrosis and syphilitic stricture. From within the bronchial lumen the various inflammatory exudates, blood clots and foreign bodies may cause obstruction. An unusual type of occlusion is that

\* From the Department of Medicine, University of Maryland, School of Medicine.

reported by Pinchin and Morlock (3) who observed a case of massive collapse which occurred very rapidly after the injection of lipiodol. They mention four similar cases reported by Jacobaeus, Selander, and Westermark. Postoperative massive atelectasis is usually caused by plugs of mucus blocking a bronchus. The following factors are contributory in the production of this type of obstruction: pre-existing respiratory tract infection, irritating inhalation anesthetics, abolishment of the cough reflex, splinting of the abdomen and surgical shock.

#### SYMPTOMS AND PHYSICAL SIGNS

One can better understand the symptoms and physical signs briefly discussed below if one bears in mind what happens when a main bronchus is completely obstructed. As stated above, the trapped gases are absorbed and the lung (or lobe) becomes atelectatic or airless. Habliston (4) and Glenn (5) have proved conclusively that this collapse is associated with a greatly increased negative intrapleural pressure on the affected side. Since the negative intrapleural pressure remains unchanged on the opposite side, the heart and mediastinal contents are drawn toward the affected side. This displacement of the viscera and the collapse of the airless lung against the chest wall account for all the symptoms and physical signs of atelectasis. It must also be borne in mind that the symptoms and physical signs of the causative condition greatly complicate the clinical picture.

The symptoms of massive atelectasis depend on the number of lobes involved and the rapidity with which airlessness occurs. A single lobe collapsed by a slowly growing bronchogenic carcinoma may cause no symptoms. Involvement of an entire lung as a result of a stop valve obstruction causes moderate dyspnea, especially on exertion, and slight cyanosis. When an entire lung is involved by a rapid check valve mechanism, marked dyspnea, cyanosis and acute respiratory distress occur. These striking symptoms are often seen in cases of postoperative massive collapse. Pain in the chest and cough producing a tenacious, viscid sputum are also frequent features of these cases, and there is commonly a moderate elevation of temperature lasting from one to four days. If the findings of Coryllos and Birnbaum (6) are accepted, postoperative pneumonia is atelectasis in which the obstructing secretions contain pneumococci of low virulence. These investigators further conclude that lobar pneumonia is a pneumococcic bronchitis plus atelectasis with virulent pneumococci in the occluding mucus plug. The symptoms of postoperative pneumonia and of lobar pneumonia are therefore those of massive collapse plus those of infection.

The physical signs of massive atelectasis are of the greatest importance in establishing the diagnosis. Depending on the rapidity with which the condition develops the signs differ in certain respects. In acute, rapidly occurring cases the patient is often in marked respiratory distress. The rapid, deep, labored breathing, with one side of the chest flat and inactive and the other side overactive, is very characteristic of these acute cases. The accessory muscles of respiration are often brought into play. It is of particular importance to remember that massive collapse of the lung is the only condition in which the heart and mediastinal contents are suddenly displaced to the affected side. The failure of this phenomena to develop in lobar pneumonia and postoperative pneumonia is due to the inability of consolidated lung to collapse.

In cases of atelectasis occurring very gradually there is no respiratory distress and the patient may look perfectly well. The chest wall on the affected side is often noted to be flat and retracted. In all cases there is diminished expansion and both the apex beat and trachea are usually noticeably displaced toward the affected side.

Palpation confirms the lack of expansion and the displacement of the trachea and apex beat. Tactile fremitus over the involved lung is diminished to absent in most cases.

On percussion the note over the collapsed lung is definitely impaired and may be flat. In some of the early cases the percussion note although impaired has a peculiar and definite tympanitic quality. When consolidation extends to an air-containing bronchus above the point of bronchial obstruction, the physical signs are greatly altered. In these cases tactile fremitus is increased, displacement of the heart and mediastinal contents is slight, and tubular breath sounds together with pectoriloquy are usually present. When consolidation is not present the breath sounds over the collapsed lung are distant to absent. The heart sounds in cases with marked mediastinal displacement are heard better on the affected side, often being clearly audible in the left midaxillary line when the atelectasis is on the left.

The finding of an impaired percussion note and absent breath sounds at the base of the lung frequently causes a mistaken diagnosis of pleural effusion to be made. However, the position of the heart should aid greatly in preventing this error. The x-ray finding of marked clouding of the involved lung area, with displacement of the heart and mediastinal contents to the affected side and elevation of the corresponding hemidiaphragm, clinch the diagnosis in most cases. X-rays of the chest are also of the greatest assistance in determining the nature of the underlying condition.

## TREATMENT

The treatment of massive collapse is divided into measures directed against the collapse and measures to combat the etiological condition. To discuss the treatment of the many etiological conditions is beyond the scope of this paper. Suffice it to say that pneumothorax is a definite aid in cases of atelectasis associated with tuberculosis and that atelectasis caused by foreign bodies and benign tumors may be cured by bronchoscopic removal of the obstruction.

The treatment of atelectasis per se is divided into prophylactic measures and curative measures. Prophylactic therapy includes the use of carbon dioxide in oxygen to prevent hypoventilation in post-operative cases, and the avoidance of drugs checking the cough reflex in conditions with thick, viscid sputum. Curative therapy consists in removing the obstruction by bronchoscopic procedures. This includes dilatation of strictures as well as removal of intrabronchial tumors, foreign bodies and exudates. The acute respiratory distress in cases of atelectasis which occur rapidly may be relieved by inducing pneumothorax to overcome mediastinal displacement. Plugs of exudate are sometimes dislodged by heavy percussion or by getting the patient to cough while lying with the affected side uppermost.

## CASE REPORTS

*Case 1.* This patient was a white male, age 55, occupation, laborer. He had had pains in the chest and back for one year. There was moderate dyspnea made worse on exertion.

Physical findings: There was a heaving pulsation in the second, third, and fourth interspaces to the left of the sternum; retrosternal dullness was increased to the right and the left border could not be determined because the note was impaired over the entire left lung. The heart and mediastinal contents were displaced to the left. Breath sounds over the left lung were everywhere suppressed.

A diagnosis of aortic aneurism with pressure on the left primary bronchus causing atelectasis of the left lung was made.

The blood and spinal fluid Kolmers were both strongly positive. An x-ray of the chest showed atelectasis of the left lung; there was erosion of several dorsal vertebrae. The patient was discharged in an unimproved condition with atelectasis still present.

Many reports are to be found in the literature of aneurism of the aorta causing collapse of the lung. The collapse is always on the left side, one or both lobes being involved. Atelectasis occurring on the left side in a patient with a positive Wassermann should always make one suspicious of aortic aneurism, since syphilitic stricture of the bronchus is relatively rare.

*Case 2.* This patient was a white male, age 42, occupation, laborer. The present illness began two months before admission with pains in the left chest as the



predominant symptom. There was a cough with mucopurulent sputum; hemoptysis; 15 or 20 pounds loss of weight; and night sweats of two weeks duration.

Physical findings: The patient had evidently lost much weight. There was ptosis of the right upper lid; a small hard nodule in the left pectoralis major muscle; deviation of the trachea to the left; displacement of the heart to the left; and an impaired note with distant breath sounds over the entire left lung.

A diagnosis of bronchogenic carcinoma with obstruction to the left primary bronchus and atelectasis of the left lung was made. The nodule in the muscle and the ptosis of the right upper lid were thought to be of metastatic origin.

The diagnosis was confirmed by an x-ray of the chest showing atelectasis of the left lung, and by a biopsy of the nodule in the pectoralis major muscle. The patient died eight weeks after admission. At autopsy a bronchogenic carcinoma was found. There was complete obstruction to the bronchus of the left upper lobe and atelectasis of the left upper lobe.

Primary carcinoma of the bronchus is a common cause of massive collapse. This has been noted with increasing frequency in recent years. Warner (7) reported atelectasis in 5 of 11 cases of primary carcinoma of the lung carefully studied at autopsy. Rogers (8) found atelectasis in 13 out of 48 autopsied cases of pulmonary malignancy.

*Case 3.* This patient was a white male age 55, occupation, newspaper carrier. He was admitted in an unconscious condition, having been overcome by gas. After treatment with carbon dioxide and oxygen he rapidly regained consciousness. The patient had had a cough for a number of years; there was no marked dyspnea.

Physical findings: The patient was poorly developed and nourished. The upper portion of the right side of the chest was flat; the trachea was deviated to the right; and cardiac dullness was entirely to the right of the sternum. Breath sounds were tubular over the right upper lobe; pectoriloquy was present.

A diagnosis of atelectasis right upper lobe, etiology undetermined, was made. An x-ray of the chest showed collapse of the right upper lobe with a large cavity in the affected lobe. There were fibroid changes in both lungs. The sputum was positive for tubercle bacilli. The patient refused treatment and was discharged in an unimproved condition with atelectasis still present.

*Case 4.\** This patient was a white female, age 25, occupation, nurse.

Present illness: The patient had had a chronic pulmonary tuberculosis involving principally the left apex for the past five years. Her condition was stationary; she was bedridden; had cough and dyspnea; and an average of five ounces of sputum per day.

Physical findings: The left chest was flat and retracted; the trachea displaced to the left; the note was dull over the entire left side of the chest; cardiac dullness was markedly displaced to the left; and the apex beat was in the fourth interspace, mid-axilla. The breath sounds were tubular throughout. The sputum was positive for tubercle bacilli.

On account of the marked dyspnea artificial pneumothorax was begun the day following admission. The symptoms were almost entirely relieved; the sputum was immediately decreased to three ounces in 24 hours and the slight elevation of temperature which had been present subsided. Two refills were given five and seven

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\* Reported through the courtesy of the late Dr. C. C. Habliston.

days after the first pneumothorax respectively. An x-ray after the third treatment showed the left lung completely collapsed (toward the hilus). The patient was discharged in much improved condition.

Case 3 illustrates atelectasis in pulmonary tuberculosis with cavity. Packard (9) believes that sputum from a cavity in the upper lobe often obstructs the primary bronchus of the lower lobe and causes collapse. Case 4 is a confirmation of the excellent results obtained by Glenn (5) who treated seven cases of atelectasis complicating pulmonary tuberculosis by artificial pneumothorax.

*Case 5.* This patient was a white female, age 20, occupation, student nurse. The patient was admitted with a diagnosis of subacute appendicitis. Operation was delayed because of severe rhinitis and laryngitis. Examination of the lungs was negative. Two days after admission a chronic inflamed appendix was removed under a basal dose of avertin supplemented by gas and oxygen. Two one-sixth grain doses of morphine sulphate were given before the anesthetic. The patient reacted rather slowly. Thirty-eight hours after operation she complained of pain in the upper portion of the right side of the chest anteriorly. She was markedly dyspneic and quite cyanotic. The right hemithorax was flat and motionless in striking contrast to the left, which appeared full and moved very actively. The percussion note over the right lung was impaired with a tympanitic, metallic quality. The heart was markedly displaced to the right; breath sounds were absent over the right lung.

The patient was desperately ill and felt at times as if she would die. The temperature was 102.4, pulse 160, and respirations 40 per minute. Her condition continued grave and after watching her for three hours it was decided to do a pneumothorax on the right side in an attempt to overcome the mediastinal displacement. In preparation for this the patient was placed on her left side, but before pneumothorax could be started she coughed and it was noticed that the previously motionless right side of the chest began to move. At first the breath sounds were tubular; within half an hour they were practically normal. The accompanying improvement in her general condition was quite dramatic; dyspnea and cyanosis were promptly relieved. In a few hours she felt entirely recovered, and her further postoperative course was uneventful.

This case illustrates a number of contributory factors in post-operative massive collapse. There was a preceding respiratory infection, a long anesthesia, and enough morphia to induce shallow breathing. The case probably represents the rapid check valve mechanism of collapse; it might possibly have been prevented by inhalations of carbon dioxide and oxygen as recommended by Henderson (10).

#### SUMMARY

1. Massive collapse of the lungs is always caused by complete obstruction of a primary bronchus; the obstruction originating outside of the bronchus, in the bronchial wall or within the lumen.
2. The symptoms of massive collapse depend on the etiological

disease, the number of lobes involved and the rapidity with which collapse occurs.

3. The physical signs are most important in making a diagnosis of massive collapse. They are all explained by the airless state of the lung and the displacement of the mediastinal contents to the affected side.

4. The treatment of massive collapse consists of prophylactic measures; measures to overcome mediastinal displacement; and measures directed against the etiological condition.

5. Five illustrative case reports are given and briefly discussed.

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## A REVIEW OF CERTAIN DIETETIC CONSIDERATIONS IN THE TREATMENT OF HEART DISEASE\*

WILLIAM S. LOVE, JR., M.D.

Before coming to the specific subject upon which I have been asked to address you tonight, I have thought it might be interesting to very briefly trace for you the rôle that dietetics has played in medicine. With primitive man, and still exhibited in folk medicine, disease and its cure were intricately linked with superstition and religion. Thus in all parts of the world in ancient times and among primitive peoples today, medicine is an effort to prevent or remove the effects of supernatural agencies such as evil and malignant spirits, offended gods, or human enemies possessed of supernatural powers by the use of charms and spells and sacrifices to the deity or spirits concerned. But just as the animal when ill turns to certain plants and grasses instinctively, so man also learned the effects of these simple remedies. This gave rise to two classes of healers—the witch doctors and priests with their incantations, charms and sacrifices, and the nature healer having considerable knowledge of herbs and simples. As man began to speculate more we find developing such dogmas as new birth or regeneration derived from primitive worship of the generative power represented by the lingam and yoni, and the effects of accidental factors such as color, numbers, solar and lunar influences, etc. These played a considerable rôle in the treatment of disease. Such dogmas arose not in one part of the world alone, but are manifestations of the development of man in all sections of the globe. Thus the dogma of rebirth became an essential part of the Hindu religion, while amongst the Saxons there was the holed stone through which scrofulous children were passed naked three times. As late as 1895 children with hernias were passed through a cleft in an ash tree in England. Numerology became an important factor especially amongst the Chaldeans, and even Hippocrates taught a dogma based on certain critical days of illnesses. Of the mystic numbers three or a multiple of three is usually for luck, good or bad. From earliest days also has existed the idea that disease is a scourge or punishment inflicted by gods, good or bad. Martin Luther expressed the conviction that “pestilence, fever and other severe diseases are naught else than the devil’s work.” Cotton Mather defined sickness as “*Flagellum Dei pro peccatis mundi.*”

The organization of medicine entirely distinct from religion first took place among the Homeric Greeks. However, even here religion

\* Read before The Maryland State Dietetic Association, December 14, 1936.

did enter to the degree that Asclepius, a Thessalian king and renowned healer, was raised to the status of divinity by his followers and a definite cult and ritual were developed. The cult of Asclepius spread widely among the Greeks and we may note that moral or dietetic remedies were those most frequently prescribed. The foundation of modern medicine was laid by Hippocrates (460–370 B.C.) and the Hippocratic School. This school stressed the concept that disease was a natural process governed by natural laws which could be known by observation. The Hippocratic School attached much importance to diet, the variations necessary in different diseases being minutely defined. Medicines were considered by this school as of secondary importance.

Rome contributed but little originality to the study of medicine, adopting the Greek School of Hippocrates and leading to so-called Graeco-Roman medicine. It is perhaps worth mentioning that a Greek, by name Asclepiades, founded in 124 B.C. in Rome a school in which diet, exercise and massage were stressed. Galen (130–200 A.D.) was the first to experiment in medicine.

Again in the 9th–12th centuries the Salernian school flourished and the basis of their treatment was dietetic as opposed to the prevailing ignorance, superstition and mysticism of the period.

That dietetic treatment was always approved, however, is not to be inferred. While the above schools largely resorted to fresh air, good diet, purgation, barley water, wine, and physiotherapy, the following examples illustrate that all dietetics were not upon the same high plane. Thus we find a diet of fried mice recommended for whooping cough. J. C. Bateson relates the case of the Turkish upholsterer, ill with typhus, who drank from a pail of pickled cabbage and recovered. His physicians then declared cabbage juice a specific for typhus. Subsequent patients dying on this régime, they modified their dictum by saying that cabbage juice was good for typhus provided the patient was an upholsterer. This is an excellent example of the confusion between *post hoc* and *propter hoc*, which is by no means absent from medical observation today.

The growth of modern dietetics has been so great and is so linked with studies in metabolism that it is impossible for us to review recent developments at this time. Suffice it to say that dietetics and regimen were advanced by William Banting of England (1797–1878) who introduced the cure of obesity by the general reduction of food, including the exclusion of fats and carbohydrates. In regard to our more particular consideration—dietetics in heart disease—Max Joseph Oertel (1835–1897) of Bavaria introduced a method of treatment con-

sisting of a protein diet with reduction of fluids, free perspiration and graduated exercise.

For our purpose of considering the rôle of dietetics in heart diseases, we shall have to make certain subdivisions of these maladies and I shall make use of the following classification:

- (1) Infectious Cardiovascular Diseases, including active rheumatic infections of the heart, subacute bacterial endocarditis and acute bacterial endocarditis.
- (2) Syphilitic Cardiovascular Disease.
- (3) Chronic Valvular Disease of the Heart, usually the result of one of the first group of diseases, especially rheumatic endocarditis.
- (4) High Blood Pressure.
- (5) Arteriosclerosis.

And finally we shall consider the rôle of dietetics in the functional state known as congestive heart failure, the possible result of any of the above types of disease.

In the dietary regimen for the infectious heart diseases the same rules hold good as for infections in general. For this particular group of infections there is no specific treatment available at present; therefore, therapeusis is based upon symptoms and upon maintaining the general nutrition of the patient in as good a state as possible. Obviously diet is, then, an important factor. Not so many years ago individuals with febrile diseases were more or less starved. Today we recognize the fact that such patients have a much better chance if nutrition is adequately maintained. The outcome of subacute or acute bacterial endocarditis is almost inevitably fatal, the latter usually within a few weeks. Subacute bacterial endocarditis may, however, run a course prolonged over months or even years. Special factors in the dietary consideration of this condition are, then, that a well balanced diet with reasonably high caloric value be maintained. Should, as often happens, anemia become marked, iron and an excess of protein should be included in the diet. Protein is one of the food components that in the past has been unwarrantedly limited in cardiovascular conditions. When illness of this type is prolonged such limitation of proteins favors the development of anemia and also through diminution of serum protein the formation of edema. Diets should be readily digestible and should, of course, contain an adequate supply of vitamins.

The same remarks also hold true for rheumatic heart disease. The active stage of this infection may exist in a low grade for months and years. People susceptible to and suffering from this infection are commonly asthenic and undernourished, and the diet should be liberal.

Again should anemia or edema occur, especially if in the latter condition the serum albumin be found low, proteins are essential. Indeed I have more than once seen edema appear and continue because proteins have been restricted for some time. Iron should be added for anemia. It has recently been suggested that a deficiency in vitamin C may play a considerable rôle in the occurrence of rheumatic infections. While this has in no way been proved, perhaps it is wise to include a considerable quantity of fruit juices in the diet, and certainly there is no known reason to the contrary. Should congestive heart failure occur during the above conditions, other factors of importance must be considered and such considerations will be taken up later.

In the treatment of syphilitic heart disease diet plays no important rôle unless heart failure be present.

In regard to diet in chronic valvular disease of the heart, there is also but little to say. In young people subject to recurring rheumatic infection it is wisest to have them a little overnourished. After forty the weight should be held at the average figure or below it, for obesity is always an added burden to an overworking heart.

Hypertension and arteriosclerosis so frequently occur together that there has always been thought to be some causal relationship between them. Thickening of the arteries may lead to some degree of hypertension if there is extensive obstruction peripherally to the flow of blood. For this to happen there must be widespread arteriolar disease, since thickening of the walls of the larger vessels does not markedly reduce the size of their lumen. That such lesions do occur is known to be a fact. However, there may be extensive arteriosclerosis without any change in the blood pressure; in normal individuals entering the arteriosclerotic period—the sixth decade—more frequently the blood pressure becomes somewhat lower. It seems more plausible to believe that the continued strain of high blood pressure may produce thickening of the arterial wall. However, there is no constant relationship here between the height and duration of hypertension and the degree of arterial change occurring. Definite organic conditions which are associated with and in some way productive of hypertension are coarctation of the aorta, prostatic obstruction, eclampsia, adrenal tumors, polycythemia, nephritis, hyperthyroidism, sudden increases in intracranial pressure and pituitary basophilism. But in the great majority of hypertensive patients there is no definitely known etiological factor. These patients are said to have essential hypertension. It is obvious that in many patients nervous and psychic influences result in elevations of pressure long before the

hypertension becomes permanent. In other individuals there is no such response to the above stimuli. This lack of knowledge in regard to the cause of high blood pressure has led to much theorizing and at one time the belief was quite prevalent that certain dietary factors were of importance. Excess of protein and of salt were almost universally considered productive of this disease, and we still find many patients who have been placed on low protein, low salt diets because of their blood pressure. The weight of opinion today is that these factors have but little if anything to do with the condition. A sounder conception deals with the total food intake. Many hypertensives are obese and many eat prodigious amounts of food. Without in any way drawing the inference that overeating causes hypertension, we do know that the blood pressure can often be reduced by under-nutrition and at times lasting benefit obtained. Therefore, individuals with obesity or who might only be said to be well nourished can with profit be placed upon a low caloric intake. For this purpose 800 calories is usually the limit. Fluids should also be limited in any weight-reducing regimen. If the patient is obese his weight should be reduced, if for no other reason than because an excess of fat and weight is an additional load on the heart.

Alcohol has also been blamed as a cause of hypertension by some but this would not be agreed to by most. However, since alcohol used as a beverage and taken in quantity does tend to cause obesity, its use, while not forbidden, should be limited to reasonable amounts. It has been said that alcohol is harmful to those under fifty, good for those above. There is some truth probably in this statement, for the young tend to abuse it and the older to make use of its beneficent properties without going to excess.

The causes of arteriosclerosis are also unknown and hence there has been much speculative literature on the subject. No one past forty is entirely free from this disease and as life progresses it also progresses, slowly in some and much more rapidly in others. Protein and alcohol again have been blamed for the premature or severe degrees of arteriosclerosis. That metabolic and toxic factors may be concerned in the production of arteriosclerosis is clearly evidenced in the increased incidence of this malady in gout and diabetes and by the production of sclerotic lesions by lead poisoning. Metchnikof emphasized toxins arising in the lower bowel as causative agents in the production of high blood pressure, arteriosclerosis, arthritis and other chronic diseases, and today we have a therapeutic method derived from this concept consisting of the replacement of the putrefactive bacteria of the lower bowel by nontoxin-producing organisms such as the acidophilus bacil-



lus. The acidophilus bacillus is usually introduced by means of acidophilus milk. Unfortunately, no very definite toxins are recognizably produced in the lower bowel by the ordinary bacterial flora found there. Furthermore, clinical experience has not shown the conditions at which this therapy is aimed, except perhaps constipation, to be benefited by it.

A more promising field of investigation as to the cause of arteriosclerosis seems to lie today in studies of fat metabolism. There is evidence both of a clinical and experimental nature that an excess of cholesterol may have an important rôle in the causation of arteriosclerosis. This, however, is not proved and it still remains to be seen if these investigations produce worth-while results. They have led, however, to a growing tendency to limit the fat intake, especially in diabetics.

The diet in arteriosclerotic patients should be well balanced and only sufficient in quantity to maintain normal nutrition. Eating large amounts at any given time should always be forbidden. Since anginal attacks are not infrequently related to the ingestion of meals or dietary indiscretions, it may be desirable in these patients to allow only very small quantities of food at a time with four or even five light meals a day. Some special consideration should also be given to the diet following coronary thrombosis. This, for the first ten days, should be largely fluid with perhaps small quantities of cereal, well-cooked rice, etc. If prostration is severe, 100 cc. of 50 per cent glucose may have to be given intravenously once or twice daily. If vomiting is present, only crushed ice and very small quantities of water should be taken by mouth during the persistence of this symptom.

Any of the conditions mentioned above may lead to congestive heart failure, which may be defined as passive engorgement occurring in the pulmonary vascular bed, the systemic circuit, or in both of these areas (T. R. Harrison). The heart muscle has been so enfeebled by disease processes or disordered metabolic processes that it is unable to continue the forward movement of the blood from time to time, and increased venous pressure and stasis in the vascular bed result. The lungs become the seat of chronic passive congestion, as do the viscera such as the liver, kidneys, etc. Edema appears first in the dependent portions of the body and ultimately accumulations of fluid take place in the peritoneal and pleural cavities. This congestion leads to further pathological-physiological changes in the body and tends to perpetuate the status of the patient and even to further the progression of symptoms.

The immediate necessity in such a state is to produce as near com-

plete rest as possible. However, as adjuncts to such rest various drugs are of considerable help. Such patients develop many symptoms of disturbed digestive processes, flatulence, constipation, diarrhea and more vague discomforts following meals. Because of the prevalence of such symptoms, and because no patient eating large and heavy meals could be considered to be "resting" his heart, the diet should be considerably curtailed. In general it should be light, readily digestible and supplied in small amounts at a time.

It is particularly desirable to limit the fluid intake because of the presence of edema. While passive engorgement is present the total fluid intake should not exceed 1500 cc. and at times should be lower.

The Carrel diet has long been popular in the early treatment of congestive heart failure. This consists of limiting the food and fluid intake of the patient to 800 cc. of milk daily in divided portions. Ordinarily such a diet cannot be continued for more than three or four days—especially in hot weather, because of the discomfort and hunger of the patient. In severe stages of decompensation 100 cc. of 50 per cent glucose may be given with advantage intravenously and several times daily. In the chemical processes taking place in heart failure glucose, derived from glycogen stored in muscle and in the liver, is lost. Glucose is essential for the contractile processes of heart muscle. Not only does glucose given intravenously supply an essential for such muscle function, but it also spares the disordered digestive apparatus, acts as a good diuretic and tends to dilate the coronary arteries, thereby affording greater nutrition to the heart muscle. If intravenous injection is not necessary, the diet should contain readily digestible carbohydrates and glucose may be added with advantage.

As long as edema is present, sodium chloride should be restricted. It is usually enough to allow no added salt for flavoring. However, if edema is persistent then a diet free from sodium chloride should be prescribed. Not only should sodium chloride be restricted in these cases but sodium also should be excluded as far as possible, for we have learned that it is the sodium ion, and not the chloride, which favors edema.

There is no need to drastically restrict protein in heart disease and indeed, as we have already seen, such limitation over any length of time favors the development of anemia, edema and other metabolic derangements. One may say that sufficient protein should be given to meet the ordinary metabolic requirements—about one gram per kilogram of body weight. If the serum albumin is low, as at times happens, it may be advantageous to increase this amount.

As the patient improves the diet may be made more liberal, but it

must be kept in mind that forever after these patients should avoid overeating and dietary indiscretions. They should maintain a diet of light, readily digestible foodstuffs, in quantity sufficient to meet the desired caloric requirements but not excessive, well balanced and containing an adequate supply of vitamins.

Before closing I should mention that Proger has proposed to obtain a diminution in the basal metabolism of advanced cardiac cases by semistarvation. He therefore uses a diet containing adequate vitamins and protein but of only 500-800 total calories. Such diets are continued for months. I do not feel that this procedure can be recommended at the moment except in cases suffering also from obesity.

Finally, I would urge you to maintain a healthy skepticism as your attitude toward unproved claims and even those that may seem proved, for the too ready acceptance of plausible explanations unbacked by fact delayed the advance of medicine by a thousand years. While Galen, 130-200 A.D., might be appropriately termed the father of experimental medicine, yet his erroneous conclusions dominated medicine until comparatively modern times. It is perhaps scarcely necessary to remind you that fads and fancies occur in dietetics. I close with the words of Hippocrates, "Life is short and Art is long; the Occasion fleeting, Experience fallacious, and Judgment difficult."

# BULLETIN

OF THE

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### NATHAN WINSLOW, A.M., M.D.

Dr. Nathan Winslow, aged 58, Professor of Clinical Surgery and Managing Editor of this Bulletin of the University of Maryland, met his death on October 7, 1937 in an automobile accident approximately twenty miles from Richmond, Virginia.

Professor Winslow was born in Baltimore on November 17, 1878. He was the son of Mrs. Rebecca Fayssoux Winslow (nee Leiper) and the late Dr. Randolph Winslow and the descendant of a long line of physicians who were of considerable importance in the development of American medicine. These prominent members of the Winslow family have been honored in this Bulletin as well as in other publications.

Dr. Nathan Winslow attended the public schools of Baltimore and graduated from Marston's University School for Boys in 1897. He completed the course at Johns Hopkins University and received the degree of Bachelor of Arts in 1900. At the same time he studied medicine at the University of Maryland School of Medicine and received his doctor's degree in 1901. Here he was awarded the University gold medal for attaining the highest scholastic standing in his class.

Upon receipt of his doctorate Dr. Winslow served as an interne at the University Hospital for three years. The first of these years was spent as an assistant to the late Dr. Thomas A. Ashby. The second was spent under the guidance of the late Dr. J. Mason Hundley, Sr. During the third year he became resident surgeon under the tutorage of his famous father.

On October 5, 1904 Dr. Nathan Winslow married Margaret Kable Massey, who graduated in the class of 1903 from the School of Nursing of the University of Maryland.



Dr. Nathan Winslow

During the last year of his internship at the University Hospital he became Prosector to the Professor of Anatomy and Instructor in Osteology in the School of Medicine at the University of Maryland (1903). On completion of his internship he was appointed Assistant Demonstrator of Anatomy (1904-1906), Instructor in Surgery and Assistant Demonstrator of Anatomy (1907-1908), Instructor in Surgery (1909), Associate in Surgery (1910), Associate Professor of Surgery (1911-1912), Clinical Professor of Surgery (1913-1930), and Professor of Clinical Surgery (1931-1937). Among his other duties he was placed in charge of Dog Surgery in 1935. St. Johns College at Annapolis conferred upon him the honorary degree of Master of Arts in 1913.

In January, 1905 Dr. Eugene F. Cordell organized the University of Maryland publication entitled *Old Maryland*. Upon the death of Dr. Cordell in 1913 Dr. Nathan Winslow became the editor of this publication until 1914, at which time the name was changed to the *University Gazette*. Unfortunately, this publication was discontinued during the World War.

In February, 1896 Dr. Thomas A. Ashby organized the publication of *The Hospital Bulletin* and became its first editor. On May 15, 1910 Dr. Nathan Winslow became editor and business manager of this publication. He continued in this capacity until 1916, at which time the name of the publication was changed to the BULLETIN OF THE SCHOOL OF MEDICINE. At his death he had completed over twenty-seven years of successful editorship of various University publications.

Before the United States entered the World War Dr. Winslow was commissioned as First Lieutenant in the Medical Reserve Corps. In July, 1916 he went with General Pershing into Mexico and was the first Maryland physician called into active service in the Army. Later he was transferred to Fort Oglethorpe, Georgia with the rank of Major. He was then placed in charge of the Embarkation Hospital at Newport News, Virginia, where he remained until 1920, when he returned to Baltimore.

Dr. Winslow was known as a prolific writer and completed over a hundred worthwhile articles for the various medical publications. Reprints of these articles have been bound in seven enlightening volumes which are an important contribution to the University Library.

Dr. Winslow was surgeon-in-chief of the Maryland School for Boys at Loch Raven, a member of the Baltimore City Medical Society, the Medical and Chirurgical Faculty of the State of Maryland, The American Medical Association, the Southern Surgical Association and

a member of the Staff of the University, Mercy, West Baltimore General and Franklin Square Hospitals.

Such a brief biography of Dr. Winslow would be incomplete without mention of his admirable character. He possessed an individual personality with sterling qualities and was never known to speak an unkind word of anyone. His honesty and sincere thoughtfulness of others form a memorial to those with whom he associated. This thought creates a lasting image of the man who endeared himself to his colleagues. He made it a point to be kind and helpful to everyone, regardless of station in life. He was particularly interested in those who undertook a new endeavor and spent many hours of his valuable time in order to give such persons good advice, guidance and actual help in the fulfillment of their aims. For example, he spent hours in the correction and editing of students' manuscripts in order to make them acceptable for publication in the medical journals to which they were to be submitted.

This BULLETIN and the University Library were practically an obsession with him. He worked untiringly to improve their standards and raise them to the high level they justly deserve.

Finally, Dr. Nathan Winslow's last act was one of mercy, an act which fitted so well into an unselfish life. He was summoned to the bedside of a sick cousin in North Carolina, where he immediately went to offer his medical advice and administrations. In an effort to return in time for his classes at the University it became necessary for him to drive at night. About twenty miles to the north of Richmond he attempted to avoid a disabled truck which was parked in the road, with the result that he drove over an embankment. His car struck a tree and the resulting impact caused a fracture of the skull. Dr. Winslow was removed to Ashland, Virginia and then to St. Luke's Hospital in Richmond, where he died. He was a devoted son of the University of Maryland who will be missed by all of his colleagues.

CARL DAME CLARKE.

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The names listed above are officers for the term beginning April 15, 1937, and ending June 30, 1938.

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## ITEMS

Dr. Allen F. Voshell, Professor of Orthopedic Surgery, at a luncheon on September 17, 1937, made an address to the doctors of El Paso, Texas on Acute Anterior Poliomyelitis and Internal Derangement of the Knee. On the same night he spoke to the General Hospital Staff on Fractures in and into the Joints. The following day he was the invited speaker at the dedication of the Carrie Tingley Hospital for Crippled Children in Hot Springs, New Mexico.

Dr. E. Eugene Covington announces the removal of his offices to the Medical Arts Building. Dr. Covington received a certificate by examination for Radiation Therapy at the recent June meeting of the American Medical Association at Atlantic City. He has purchased 100 milligrams of radium.

Among our graduates located on the Pacific Coast is Thomas S. Saunders, M.D., class of 1932. After interning at the University Hospital, Baltimore and the University of Chicago Clinics, Dr. Saunders spent three years as a Fellow in Dermatology on the Mayo Foundation, Rochester, Minnesota and received the degree of Master of Science in Dermatology at the University of Minnesota in 1937. He is engaged in the practice of dermatology in Portland, Oregon and is Clinical Instructor in Syphilology at the University of Oregon Medical School.



The following notice should be of much interest to our readers. It is about Dr. Edward Warren, an unique character who for a short time prior to the War between the States occupied the Chair of Materia Medica and Therapeutics at the University of Maryland. Inasmuch as he was also one of the founders of the Washington University School of Medicine and an organizer of the College of Physicians and Surgeons, he has played a prominent part in the Medical Annals of Maryland. The account appeared in the Evening Sun, Baltimore, September 6, 1937, in its book review column.

#### GORGEOUS MEDICO

G. K. Chesterton, the romantic, noted long ago in "Baltimore, the city of Maryland"

A thousand things of the world in store,  
The story standing in every door  
That beckons with every hand,

but there are those to whom this seems poetic exaggeration. Yet proof of the accuracy of the observation is continually coming up. For instance, there has recently been published in pamphlet form an address made last spring before the Richmond Academy of Medicine by Dr. Hubert A. Royster, of Raleigh, N. C. This pamphlet dealt with one of the most colorful figures in Baltimore medical history, Edward Warren Bey.

Bey, be it observed, is not his surname but his title, or one of his titles. Another was Founder of the College of Physicians and Surgeons of Baltimore. Another was *Chevalier de la Legion d'Honneur*. Another was Commander of the Order of Osmanieh, of Turkey. Another was Knight of the Order of Isabella the Catholic, of Spain. Another was Medical Inspector of the Army of Northern Virginia. Bey to the Khedival Firman was merely the last of his long collection, except one. Starting with M.D., he ended with an LL.D. conferred by the University of North Carolina. In the meantime he had served, successively, the United States, the Confederate States, the Khedive of Egypt and the French Republic. As a pupil of Jobert and friend of Charcot, he gained the then unusual distinction, for a foreigner, of being made a licentiate of the University of Paris, where he died in 1893.

What is of particular interest to Baltimore is the fact that here this colorful individual achieved both distinction and ruin. The latter came about through his testimony at the trial of Mrs. Wharton, in Annapolis, in the winter of 1871-72. She was accused of poisoning General Ketchum, but Warren swore that the general had died of cerebrospinal meningitis, and could not be shaken. Public opinion was so strong against the accused, however, that the doctor who had saved her was subjected to ostracism and abuse that finally drove him from the city.

This is the sort of thing that ought to make Baltimore's history one of the richest in the country. One does not ordinarily associate medicine with romance, yet the stories of Warren Bey, Jesse Lazear and Samuel Mudd might have kept Dumas busy for a year. From Joshua Barney to Desmond Holdridge, the city has been amazingly prolific of adventurers; but since Kennedy and Key its production of poets and romancers has not been correspondingly great. So it remains for a North Carolina doctor to dig out of obscurity this gaudy and glittering figure.

If the world regards Baltimore as historically threadbare, whose fault is it but Baltimore's?

Dr. Arthur M. Shipley, professor of surgery, has returned to Baltimore from a trip to Europe.

Dr. Kenneth B. Jones, class of 1911, is medical director of the Eastern Shore State Hospital located at Cambridge, Md. Dr. Jones was formerly superintendent of the Rosewood State Training School, Owings Mills, Md. He is president of the Baltimore County Medical Association.

Dr. Hugh B. McNally, class of 1934, has opened offices at 104 W. Madison Street, Baltimore, Md. He limits his practice to obstetrics.

Dr. Harry Friedenwald, P. & S., class of 1886, professor emeritus of ophthalmology, read a paper on Amatus Lusitanus, April 26, 1937, before the Johns Hopkins Medical History Club.

Dr. Henry F. Ullrich, Baltimore, Md., class of 1929, read a paper on the Classification of Joint Affections before the University Hospital Staff, on May 17, 1937, and on March 17, 1937 Dr. J. M. Reese, Baltimore, class of 1920, read a paper before the Baltimore County Medical Association on Some Suggested Facts about Medical Extension in Obstetrics.

Dr. Julius Friedenwald, Baltimore, P. & S., class of 1890, professor emeritus of gastro-enterology, read a paper before the Cordell Historical Society of the University of Maryland on Some Incidents of Medical Interest in the Life of General Lafayette, April 6, 1937. At the same meeting Dr. Manfred S. Guttmacher, chief medical officer of the Supreme Bench of Baltimore, presented an address entitled The Insanity of George III.

Dr. Charles Reid Edwards, Baltimore, Md., class of 1913, has returned home from a trip to the Continent.

Dr. Marshall B. West, Catonsville, Md., class of 1901, while cruising on the Magothy river on September 3, 1937, had to jump overboard because the boat caught fire after an explosion in the engine. He was in the water for a half hour when rescued by Antonio di Paula. We are glad to report that he suffered no injury other than exposure.

## COMMUNICATIONS

September 1st, 1937.

Mrs. Ruth Lee Briscoe,  
Librarian, U. of Md.,  
School of Medicine,  
Baltimore, Md.

Dear Madam:

Several years ago I gave the Library of the University of Maryland a copy of a "Manual of Military Surgery," by Edward Warren.

Dr. Warren was, at one time, connected with the teaching staff of the University of Maryland. He was Surgeon General of North Carolina during the Civil War and Medical Director for General Lee. He was also one of the promoters in the organization of the College of P. & S. of Baltimore, and later became physician to the Khedive of Egypt and Chief Surgeon of the General Staff of the Egyptian army.

In view of Dr. Warren's connection with the University of Maryland as it now is I thought it might be of interest to the Library to know more of this interesting man's life. This I have in the form of an address by Dr. Hubert A. Royster, of Raleigh, N. C., which was delivered before the Richmond Academy of Medicine, April 13th, 1937 and published in the Bulletin of the Academy. I will be glad to forward this to you if it is desired.

The book I gave the Library is very rare, only a few copies being now in existence. I think a "Jubilee" commemorating the one hundred and twenty-fifth year of the existence of the library will be very fitting, as you suggested.

I am an alumnus of the University of Maryland, class of 1895.

Yours truly,

J. W. P. Smithwick.

La Grange, N. C.

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9/13/37

C of P & S

Dear Sirs:

May I have the address of R. G. or Robert G. Davies of the class of 1882.

I am of the class of 1881, age 83.

Maternity cases to date 5487.

I am a general practitioner, having worked hard yet feel like 40, clear headed, short of wind on stair climbing, etc.

Yours truly,

J. Spencer Callen.

21 S. Jardin Street  
Shenandoah, Pa.

#### BIRTH

A son, Christopher Campbell Shaw, Jr., was born to Dr. and Mrs. Christopher C. Shaw, class of 1931, on August 3, 1937, at the Rockingham Hospital, Bellows Falls, Vermont.

## WEDDING

Dr. Charles E. Gill, Boston, Mass., class of 1929, and Miss Freda Gertrude Fazenbaker of Baltimore, Md. were married in Baltimore at Christ Lutheran Church on June 19, 1937. Miss Fazenbaker, a graduate of the University of Maryland Training School for Nurses, class of 1929, has been on the nursing staff of the University Hospital. Dr. Gill is associated with the Massachusetts Department of Public Health with offices at 546 State House, Boston.

## NOTICE

## POSTGRADUATE WORK IN CARDIOLOGY

Arrangements can be made through the Office of the Dean to obtain postgraduate work in cardiology. This type of course is designed primarily for the practitioners of the State of Maryland and will consist of twelve Mondays spent in the Heart Clinic of the Dispensary, the Heart Station of the University Hospital and on the wards of the same Institution. Work may be started on any Monday. The fee for such a course will be \$60.00.

## DEATHS

- Blair, Frederick Lewis**, Providence, R. I.: class of 1911; veteran of the Spanish-American and World Wars; aged 59; died, April 24, 1937.
- Broadrup, George Lincoln**, Lancaster, Pa.; P. & S., class of 1891; aged 73; died, April 28, 1937, of coronary occlusion.
- Brown, Melvin James**, Mars Hill, Me.; B. M. C., class of 1896; aged 83; died, June 16, 1937, of chronic myocarditis.
- Caldwell, John Cabeen**, Chester, S. C.; class of 1914; member of the state board of medical examiners; aged 47; died, May 10, 1937, of carcinoma of the liver.
- Cromwell, Martin John Spalding**, Baltimore, Md., class of 1894; at one time chief of the outpatient service in the surgical dispensary of his alma mater, aged 65; died, July 14, 1937.
- Cosner, Philip, H.**, Newark, Ohio; B. M. C., class of 1896; past president of the Licking County Medical Society; aged 66; died, May 5, 1937.
- De Forest, William Clifford**, Clarksburg, W. Va.; B. M. C., class of 1896; aged 71; died, June 13, 1937.
- Dorr, Lucius Bradley**, Buffalo, N. Y.; class of 1890; aged 71; died, May 5, 1937, of cerebral hemorrhage.
- Eckerdt, Alonzo Burton**, Kaneohe, Hawaii; P. & S., class of 1911; member of the American Psychiatric Association; aged 50; died, June 18, 1937.
- Essick, George C.**, Congress, Ohio; P. & S., class of 1893; aged 69; died, May 31, 1937, of chronic interstitial nephritis.
- Hart, David Aaron**, Dorrance, Pa.; B. M. C., class of 1903; aged 64; died, May 14, 1937, of cardiac disease and chronic interstitial nephritis.
- Hackler, Garfield McCoy**, Dallas, Texas; class of 1891; professor of clinical surgery at Baylor University, College of Medicine; fellow of the American College of Surgeons; aged 72; died, May 6, 1937.
- Hanigan, Roscoe S. K.**, Quincy, Mass.; class of 1916; aged 49; died, July 30, 1937.
- Heflin, Howell Towles**, Birmingham, Ala., class of 1893; fellow of the American College of Surgeons; aged 60, died, June 18, 1937, of portal cirrhosis.
- Hilgartner, Henry Louis**, Austin, Texas; class of 1889; member of the American Academy of Ophthalmology and Oto-Laryngology; fellow of the American College of Surgeons; consulting eye, ear, nose and throat surgeon and examiner, U. S. School for Aero-

- nautics during the World War; aged 68; died, June 9, 1937, of coronary occlusion.
- Kahn, Max**, Baltimore, Md.; P. & S., class of 1905; aged 54; died, September 23, 1937, of a lingering illness.
- Keenan, Francis A.**, Newport, R. I.; P. & S., class of 1902; formerly city physician; aged 59; died, May 28, 1937, of cerebral hemorrhage.
- Kefauver, Maurice, D.**, Smithsburg, Md.; B. M. C., class of 1904; aged 57; died, June 19, 1937, of carcinoma of the kidney.
- Hill, William Lee**, Arcadia, N. C.; P. & S., class of 1893; aged 63; died, recently, of a lingering illness. The deceased was born, September 25, 1873, in Stokes county, the son of Joel Hill and Harriett (Kiser) Hill. He was married to Miss Anna Vaughn Gentry in 1894. She died in 1901. Dr. Hill attended the public schools in Stokes county, N. C., later the Oak Ridge Military Institute.
- Leyko, Julius Joseph**, Baltimore, Md.; class of 1927; fellow of the American College of Surgeons, instructor in surgery, School of Medicine, University of Maryland; aged 33; died, June 8, 1937, of an accidental overdose of sodium amytal.
- Linthicum, John W.**, Catonsville, Md.; class of 1884; aged 75; died, April 18, 1937, of nephritis and cardiac disease.
- MacNeil, Charles S. J.**, Malden, Mass.; B. M. C., class of 1909; aged 57; died, June 29, 1937.
- Malone, Jeremiah Demas**, Marietta, Ga.; class of 1884; past president of the Cobb County Medical Society; at various times member of the city council and board of education; was president of the county board of health; aged 76; died, April 11, 1937.
- McElroy, Riley Park**, Ada, Ohio; B. M. C., class of 1903, aged 66; died, May 13, 1937, of pneumonia.
- Morrow, William T.**, Loysville, Pa.; B. M. C., class of 1908; aged 61; died, May 29, 1937, of syringomyelia.
- Murray, Edward Thomas**, New York, N. Y.; B. M. C., class of 1898; aged 63; died, May 7, 1937.
- Peppers, Guy Stewart**, Fort Pierce, Fla; B. M. C., class of 1911; served during the World War; aged 56; died, April 20, 1937.
- Phillips, James R.**, Preston, Md.; class of 1869; formerly member of the state legislature; aged 92; died, June 18, 1937, of hypertrophy of the prostate gland and arteriosclerosis.
- Sewell, James Atkin**, Rockwood, Tenn.; P. & S., class of 1879; aged 88; died, June 5, 1937.
- Smith, Munford**, Los Angeles, Calif.; class of 1919; past president of the American Sanatorium Association; a director of the National

Tuberculosis Association; fellow of the American College of Physicians; medical director of the Barlow Sanatorium; aged 45; died, June 28, 1937, of cerebral thrombosis.

**Statham, O. W.**, Leesburg, Ga.; B. M. C., class of 1895; chairman of the county board of education; aged 65; died, May 19, 1937, of Brill's typhus fever.

**Thompson, Frank Howard**, Annapolis, Md.; class of 1879; aged 82; died, July 28, 1937, of cardiac disease. Dr. Thompson was a descendant of Charles Wilson Peale, the Colonial painter. He would have been 83 years old on August 21 and retired from active practice several years ago. He was connected with the Tuck, West and Chew families and was a son of the late Dennis Claude Thompson and Sarah Elizabeth Thompson née Tuck. Born in Annapolis, he was educated at St. John's College. In 1883, he married Miss Martha Rosalie Thomas, of Queen Anne's County, Maryland, a descendant of Colonel Joel Thomas. Dr. Thompson served in the City Council as Alderman from the Second ward for many years, later becoming secretary-treasurer of the Annapolis Water Company.

**Walcott, Harry Gilmer**, Dallas, Texas; B. M. C., class of 1901; fellow of the American College of Physicians; emeritus professor of gastroenterology at the Baylor University College of Medicine; associate professor of physiologic chemistry at his alma mater, 1901-1902; served during the World War; aged 58; died, June 2, 1937.

**Watkins, William W.**, Clemson, S. C.; class of 1883; aged 84; died, May 1, 1937, of cardiac disease.

**Weaver, Jacob J., Jr.**, Uniontown, Md.; class of 1870; bank president; aged 88; died, April 10, 1937.

**Wendelboe, Lars Thomas**, Newark, N. J.; B. M. C., class of 1895; aged 70; died, April 23, 1937, of carcinoma of the sigmoid.

**Wilkinson, Vernon Stevens**, Cardiff, Md.; class of 1914; aged 48; died, August 30, 1937.

**Wilson, William Welford**, Aurora, Ill.; class of 1921; aged 42; was killed May 27, 1937, in an automobile accident.

**Winslow, Nathan**, Baltimore, Md.; class of 1901; professor of clinical surgery; aged 58; died, October 7, 1937, of injuries sustained in automobile accident.

**Ziegler, Charles Benjamin**, Baltimore, Md.; Washington University School of Medicine, class of 1876; aged 81; died, May 5, 1937, of carcinoma of the prostate gland.





# BULLETIN

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### PERNICIOUS ANEMIA IN THE NEGRO\*

JOSEPH MILLETT, M.D.†

HEMPSTEAD, N. Y.

Pernicious anemia is a hyperchromic, macrocytic anemia due to the lack of the intrinsic factor of Castle. The symptom complex was first described by Addison in 1885 in which he recognized it as a clinical entity. Nearly 20 years later it was again described by Biermer, who drew attention to the blood changes and proposed the name pernicious anemia.

Very little knowledge concerning its racial distribution is available. It is most common in the white race, especially in the Nordic group. In an analysis of 117 cases (1) 110 were British, 6 were Hebrew and 1 was German. Friedlander (2) found 500 cases of pernicious anemia in 80,415 admissions to the Peter Bent Brigham Hospital between April, 1913 and November, 1932. Over 1 per cent of the patients from Canada, Sweden and Denmark and over 0.7 per cent of those from Ireland and England had the disease as compared with 0.18 per cent from Russia (all Hebrews except 1), 0.17 per cent from Italy, 0.06 per cent negroes and 0.22 per cent from miscellaneous countries. The negro total was 3 cases in 500. One case has been described in a Singhalese by Spaar (1934) who claims that he has been able to find no record of other cases occurring in Asiatics (3).

Pernicious anemia in the negro is to be considered rare judging by the scattered reports of small series of cases appearing in the literature. Where it has occurred, doubt has been cast on the purity of the strain

\* From the Medical Service of Dr. R. E. Lease, Meadowbrook Hospital.

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(4) (5). At the Cook County Hospital Carr (6) collected 148 cases of pernicious anemia up until 1920 and found 6 cases occurring in negroes, an incidence of  $4\frac{1}{2}$  per cent. Traut (7) continued this study at the same hospital from 1921-1926 and found 8 cases in a total of 256, an incidence of 3 per cent. The number of negro admissions was 33 per cent of the cases admitted to the hospital. Jamison (8) at the Charity Hospital in New Orleans found 64 cases of pernicious anemia in 122,564 admissions from 1921-1926. Of the total admissions 25 per cent were negroes, among whom there were 12 cases of the disease, an incidence of 29 per cent. Kampmeir and Cameron (9) in the period from 1926-1936 found 14 cases and 4 presumptive cases of pernicious anemia in 247,239 colored admissions to the same hospital. Willson and Evans (10) reported 8 cases in a study of 111 cases collected at the Johns Hopkins Hospital between 1918-1922, an incidence of 7.2 per cent, and commented on the fact that all 8 were mulattos. They were the first to suggest the possibility of crossbreeding as a factor in pernicious anemia in the negro. Evans (11) in 1926 reviewed all 578 cases of pernicious anemia at the same hospital and reported a total of 9 negroes, an incidence of 1.5 per cent. These 9 cases occurred in 34,280 negroes admitted since the opening of the institution. Tice (12) reports 10 additional cases out of a total of 64 cases in a series reviewed at the Johns Hopkins Hospital between 1930-1934. Matthews (13) in an analysis of 4,940 admissions to the U. S. Veterans Hospital, Tuskegee, Alabama, for a 5 year period up to November, 1928 reports 3 cases, one of which he lists as doubtful. Strauss and LaPorte (14) found one case in 8,527 negro admissions in the first 5 years of the existence of the Morrisania Hospital, Bronx, New York.

The following case is reported from the Meadowbrook Hospital, which had been operating for only 14 months up until the time of the patient's admission.

#### CASE REPORT

Case No. 5567. J. H., a 43 year old, black, male garage helper, was admitted to the Meadowbrook Hospital on September 6, 1936 with the complaints of inability to walk, dizziness, loss of appetite, weakness, gastric distress, eructations, loss of weight, and numbness and tingling of the extremities. The patient stated that his present illness began about 6 months ago and was ushered in by weakness and fatigue. He then noticed a progressive loss of weight and believed he had lost 30-40 pounds since the onset of his symptoms. There was no previous pain, but in the last 6 weeks there has been epigastric distention and distress about two hours after meals with relief by belching. There has been a progressive loss of appetite. He vomited once on the day of admission. There has been no intolerance to any special type

of food. The patient had noted a slight nonproductive cough for the past 6 months, some slight shortness of breath, but no precordial pain or peripheral edema. There has been numbness and tingling, especially of the upper extremities for the past two months. One week before admission the patient noted increasing dizziness, had difficulty in walking and staggered about in a drunken fashion. Two days before admission he had to take to his bed.

The past history was entirely negative. The patient was born in Georgia, but does not remember his family very well. As far as he could recall there has never been any white blood in the family. He had never been hospitalized and he denied venereal infection.

Physical examination revealed a tall, lanky, well-developed, colored male, with marked evidence of loss of weight, lying quietly in bed. He was oriented and co-



operative but apathetic; his responses were sluggish and he had difficulty in remembering. He tired easily under questioning. The pertinent physical findings were as follows:

The eye signs were negative. However, there was a lateral nystagmus which was not sustained. The retina was markedly anemic. The tongue was not unusual in appearance. The heart and lungs were negative and the blood pressure was 112/70. Upon standing the patient complained of dizziness. The Romberg was positive. He walked a few steps with a markedly ataxic gait and then fell to the floor. Upper and lower extremity reflexes were present, as were the abdominals. There was a bilateral Babinski. The patient showed a loss of the sense of position. Marked incoördination was revealed by the finger to nose and heel to knee tests. Vibratory sense was lost up to the costal borders.

*Laboratory findings:*

*Urine:* Essentially negative.

*Blood:*

R.B.C.	2,500,000
Hb	36%
C. I.	0 8+
Reticulocytes	0

Many macrocytes, marked achromia, anisocytosis, and poikilocytosis	
Leucocytes.....	9500
Polys.....	45%
Lymphs.....	50%
Monos.....	3%
Eosinoph.....	1%

*Bleeding and coagulation time:* Normal.

*Icteric index:* 20.

*Van Den Bergh:*

Direct..... Negative

Indirect..... Positive 8 mgm. Bilirubin

*Wassermann & Kahn:* Negative.

*Blood Chemistry:* Normal Limits.

*Fragility Test:*

Control—Began..... 44

Complete..... 34

Patient—Began..... 42

Complete..... 28

*Gastric Analysis:* Fractional method—No free HCl in any specimen, with total acid ranging between 8–10 degrees. No free HCl obtained in second test with histamine.

*Spinal tap:* Negative.

*Stools:* Negative for blood and parasites on two occasions.

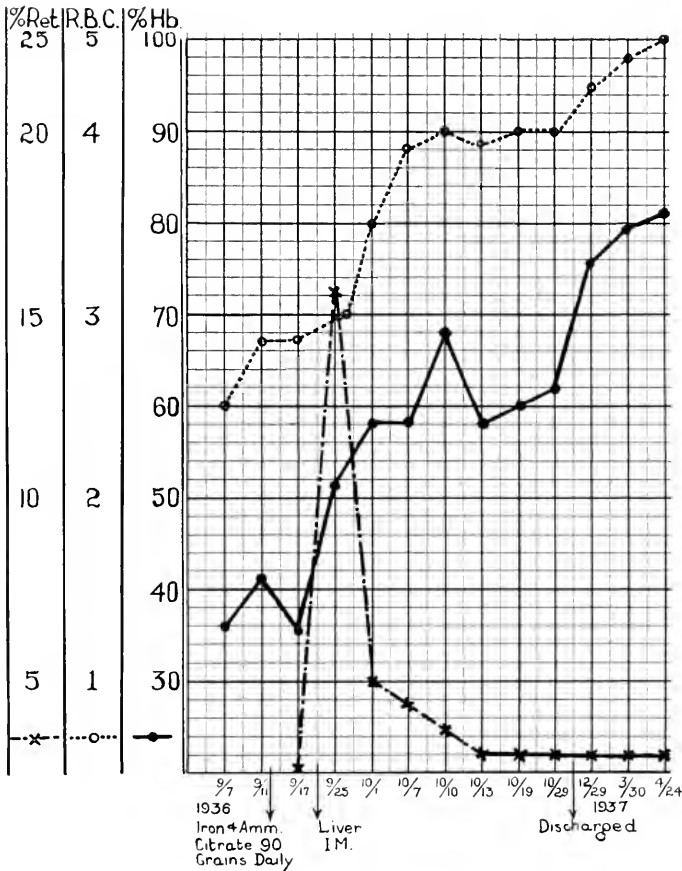
*Gastro-intestinal, barium enema, and gall bladder series:* Negative.

*Clinical course:* The general apathetic attitude and the gastro-intestinal symptoms of the patient continued until the institution of liver therapy. He ran a low grade temperature ranging between 100–101.4 (R). Five days after admission he was started on 90 gr. of iron and ammonium citrate daily with no effect. Eleven days after admission he was given 15 cc. of liver extract intramuscularly and 3 cc. daily thereafter. The hematopoietic response is shown on the graph. Clinically the patient became brighter and more talkative and took an active interest in his surroundings. His temperature dropped to normal and stayed there. Seven days later he was sitting up in a chair and 18 days later he was up and about. He walked on a slightly broadened base and was somewhat incoördinate in the finer movements of the hands and fingers. The signs of posterolateral sclerosis were still present as on admission. He was discharged 7 weeks after admission and instructed to take a liver preparation by mouth. He was last seen on April 24th, 1937. The cord signs were still present. His blood count was normal and he admitted taking no liver in any form for the past 2 months.

#### COMMENT

In the negro the typical clinical appearance of waxy, smooth, icteroid-tinged skin and pearly eyeballs is naturally lacking. Aside from this the disease as manifested in this case in no way differed from that seen in the white race. The blood picture, except for the white count (it usually ranges between 3,000–4,500) and color index, was quite typical. The use of liver in this disease not only presents a specific treatment but may also be used as an aid in diagnosis and prognosis. In all anemias responding to the pernicious anemia factor (liver), provided adequate amounts of potent material are given, there

are certain general features of the reticulocyte response which are constant. Within a period of 2-10 days the percentage of reticulocytes in the peripheral blood increases and progresses to a maximum within 3-10 days. It then gradually and slowly returns to normal and is followed by a rise in the R. B. C. and Hb. (Minot and Castle, 1935) (3). That this held true in the case reported is well illustrated by the graph.



Achlorhydria often precedes the onset of the anemia and the cord changes and is present in both. It is characterized by its completeness and invariability, and histamine stimulation will not produce any free HCl. The total acidity is usually low. In this case no free HCl was obtained from the stomach, even with histamine, at the height of the remission. The gastric symptoms in pernicious anemia may be quite severe. In Straus and LaPorte's case laparotomy was

resorted to at another hospital, with negative findings, because of abdominal symptoms. With the administration of liver the symptoms cleared up. The cause of the gastric symptoms and their relation to anacidity is unknown. A series of unexplained anacidities in apparently healthy people were followed for a period from 1 to 7 years and in no case did carcinoma of the stomach, hypochromic anemia or pernicious anemia develop (15).

That pernicious anemia has been linked with cord degenerations has been known for a long time, yet the basis of the association is still unknown (16). The essential pathologic process consists of degeneration of the posterior and lateral columns of the spinal cord with its symptoms of parasthesias and ataxias, signs of disturbed vibratory and position sensation, and Babinski's sign. With the return of the blood picture to normal the patient will be up and about, apparently recovered. Although the cord damage is permanent the ataxia is lessened with the return of strength and attention to the sensory tests is increased. This case was able to return to a laboring job in spite of persistent cord signs.

As to the purity of the racial strain in relation to the disease, it is obviously impossible to obtain accurate data since the patients themselves are rather vague on this point. It is, of course, interesting to speculate on the possibilities of whether or not the incidence of the disease increases with crossbreeding or whether it is the result of changed environment, climate, food, etc. However, there will be no definite progress until a thorough study is made of the pure negro in relation to pernicious anemia.

#### SUMMARY

1. The literature on pernicious anemia in the negro is reviewed and 64 cases and 5 doubtful cases collected.

2. A case of pernicious anemia with posterolateral sclerosis in an apparently full-blooded negro is reported.

3. Pernicious anemia in the negro is identical with that seen in the white race.

4. Pernicious anemia is probably not as uncommon in the negro as the literature would indicate, and a review of the cases in hospitals where the negro census is high would probably reveal many more cases of the disease.

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# NEUROLOGICAL COMPLICATIONS ASSOCIATED WITH THE ADMINISTRATION OF HORSE SERUM\*

HOWARD M. BUBERT, M.D.

BALTIMORE, MD.

## INTRODUCTION

The increasing utilization of foreign sera as the vehicles for potent biological therapeutic agents in the treatment of disease makes it necessary for the profession to know and appreciate their harmful potentialities. Care in their administration and a reasonable knowledge of their eccentricities should do much to reduce such undesired reactions and as time goes on, we shall, no doubt, learn to extract the last ounce of benefit from them with a minimum of harm to our patients.

## HISTORICAL

One is apt to consider the untoward symptoms that appear subsequent to the administration of heterologous serum a problem of relatively recent date. It is interesting to note that in 1667 Dennis (1) introduced transfusion of lamb's blood as a therapeutic measure and in 1874 Dallera described a general urticarial eruption occurring 10 days after its use. This procedure was infrequently resorted to, consequently little was known of the bad results that might occur until the advent of antitoxin therapy in 1894. From this time on developments were rapid and in 1905 Von Pirquet and Schick demonstrated the presence of antibodies and postulated that the symptoms were due to the interaction of these with circulating antigen. This conception is still the one generally accepted although Coca offers objections to it which have not been refuted.

## TYPES OF REACTIONS

There are three possible reactions that may result from the parenteral administration of heterologous sera: atopic or inherited sensitivity, ordinary serum sickness and accelerated serum sickness or serum accidents.

The danger inherent in the first of these is fairly well recognized by the profession and will not be discussed here.

Accelerated serum sickness or serum accidents following multiple

\* From the Allergy Clinic, Department of Medicine, University of Maryland School of Medicine.



doses of the material also are accepted rather generally as one of the possible untoward effects of serum therapy.

The possibility of serious complications being associated with the second type of reaction mentioned above, namely, serum sickness, rarely receives much consideration.

The case reports given below demonstrate clearly that serum sickness and accelerated serum reactions may be severe and further that the possibility of neurological complications must be considered when foreign serum is administered.

#### UNUSUAL REACTIONS

In our hospital at the University of Maryland, foreign, therapeutic sera are given by all of the services, consequently it is impossible to discover the true incidence of serious, unusual reactions. Despite this handicap and notwithstanding the paucity of reports in the American literature, these cases are selected from those showing neurological complications which have come to my attention in the space of a few years. Because of this I am led to believe that many more cases would be discovered if watched for by the profession. One of the most recent and widely used textbooks devoted to the subject of internal medicine rather deprecates the possibility of nervous system complications and states that most of the observations along this line are to be found in the French literature.

The following cases are presented in an attempt to show that this attitude of complacency is unwarranted and that even simple serum sickness, following the first dose of foreign serum, may result in disabling or even fatal illnesses.

*Case 1.* About 8 months ago this patient came to the accident room of Mercy Hospital with a penetrating wound of the hand. After appropriate care a prophylactic dose of antitetanic serum (horse) was administered in the same arm. Two days later pain began in the opposite arm, especially in the region of the shoulder. The next day exquisite pain attacked all of the joints. After an interval of 3 days the patient became free of symptoms except for pain in the opposite arm and this persisted for 10 days, unrelieved by any form of medicine.

It was then noticed that some atrophy of the muscles of the affected shoulder had occurred. After 6 weeks of pain and practically complete paralysis of the entire limb, the pain began to subside. Two weeks later he attained a slight amount of motion. For the past 6 months the motor function has been improving, as has the trophic condition, so that now the patient is probably 95% normal in regard to this extremity but only after 6 months of disabling illness and careful treatment.

*Case 2.* A medical student, age 22 years, was admitted to the University Hospital, July 27, 1936 and was discharged on August 4, 1936.

*Family History.* Not significant.

*Past History.* The significant fact of the past history is that the patient received diphtheria antitoxin at 10 years of age and scarlet fever antitoxin at 12 years of age.

*Present History.* Tetanus antitoxin was injected into the triceps muscle of the left arm 2 weeks ago and 8 days later he developed serum reaction. This consisted of transient urticaria, pains in the right elbow and both shoulders along with normal temperature. The right elbow and the left shoulder cleared satisfactorily after 2 days but the discomfort persisted in the right shoulder. The pain was so severe at the onset of joint symptoms, that the patient took an excessive amount of morphia and became nauseated. About the 14th day pain returned to the left shoulder.

At the time of admission, a neurological examination was made by the attending physician, Dr. I. J. Spear, with the following findings: "Definite weakness and loss of muscle tone in the right deltoid muscle; shows partial reaction of degeneration." His impression was a "very mild toxic neuritis of the right brachial plexus and probably of the left."

On August 4, 1936 a neurological report stated, "Patient is beginning to regain fairly good use of his deltoid muscle. Electrical examination shows partial reaction of degeneration of the anterior fibers of the deltoid and a complete reaction of degeneration of the posterior fibers of the deltoid."

The final diagnosis was neuritis of the right circumflex nerve and transitory edema of the left, following administration of horse serum.

On August 24, 1936 a final note was made as follows: "Small area of anesthesia extending from the crown of the shoulders down along the outer side of the arm about four inches. The anterior portion of the deltoid reacts to faradic stimulation. The biceps, triceps and other muscles of the arm and forearm react well to faradic stimulation. Galvanic stimulation of the right deltoid is not as prompt or complete as normal. The volume of the right deltoid is much less than the left. The patient shows definite improvement. He has better voluntary movement of the right shoulder joint."

*Case 3.* On December 31, 1932 the patient ran a copper wire in his foot, for which he was treated at a dispensary and given antitetanic serum. After 2 days he returned to his work without symptoms until January 10, 1933, when he had severe hives, evidently from the serum administered 10 days before. On January 11th at 4 a.m. he had to be helped to the bathroom by his wife because he could not void in bed. At 6 a.m. on January 11th, the patient was confused and, while his wife went to get him a cup of coffee, he fell off the chair and struck the right side of his head. He could not help himself and it was necessary to put him to bed. He never talked after the accident; he only mumbled. Apparently his left side was paralyzed by the blow. He was semiconscious on the evening of January 12th and was brought to the hospital.

A craniotomy was performed by Dr. Charles Bagley. The brain was under great pressure and in the right temporal region redness was made out which was thought to be a subdural hemorrhage. This was confirmed by incising the dura.

The patient left the operating room in extremis and died shortly afterward. An autopsy was performed.

*Synopsis of Autopsy.* Gross hemorrhage in right hemisphere. Numerous sections revealed no lesion of any sort either of a tumor nature or of the arteries. The hemorrhage was found to be perivascular.

## COMMENT

The first two cases reported are examples of the commonest neurological complication occurring after the administration of horse serum, namely, involvement of the brachial and cervical plexuses. As is usual in these cases, motion had almost completely returned to normal after months of semi-invalidism.

Anyone who handles this type of case cannot help but be impressed by one outstanding fact and that is the degree of pain present. These patients suffer pain that can be compared only to that occurring during the crises of tabes. I have seen a case with such severe pain that one-half grain of morphia administered hypodermically every hour failed to relieve the pain to any appreciable degree.

It so happens that most of these reactions occur in the peripheral nerves without endangering the life of the patient, but one cannot have seen any of these patients without feeling that it was a matter of sheer good fortune that the central nervous system was not involved.

These instances of definite and severe involvement of the nervous system are offered in support of my contention that the administration of heterologous serum is a procedure deserving of some respect and one not to be undertaken quite as lightly as is usually done by the accident room intern.

## PREVENTION AND THERAPY

The primary step in the intelligent use of foreign sera, either for prophylactic or for therapeutic purposes, is to properly classify the patient.

Fortunately, the serious, naturally acquired atopic cases are quite readily recognized by their family or past history of allergy and, especially, by their history of reactions upon contact with animals. If there is a definitely positive skin test associated with the foregoing, the patient should be hospitalized for serum administration (2).

At the present time we have no clear-cut method by means of which patients likely to suffer from primary serum sickness can be determined.

We can, however, predict with some degree of accuracy which patients are apt to respond to parenterally given serum by an accelerated reaction as the result of a previous dose. Incidentally, this dose may have been the minute amount contained in diphtheria toxin-antitoxin (not more than 0.0001 cc.) as shown by Tuft (3). Here one's decision must rest upon the urgency of the need, in slight degree upon the skin test and, finally, upon whether or not the conjunctival test is positive

and whether or not the same antitoxin can be obtained in the serum of a different species of animals.

In this regard it is interesting to consider Simon's (4) conclusion that there is a species nonspecific antigen present in mammalian bloods in addition to the usual species specific antigen, and that in a few cases sensitivity to this nonspecific factor will exist and complicate the picture. One must further remember that when a serum other than the common horse serum is used, subsequent use of it may also result in an accelerated reaction.

#### AVOIDANCE OF SERUM SICKNESS

In the rather recent past a new means of avoiding sensitization to foreign serum has been offered in the product of tetanus toxoid. This alum precipitated material is given for the purpose of stimulating a lasting immunity to tetanus. Because the antibody titre does not remain at a high point, a further dose is given in the event of injury. It is claimed that the antibody response at this time is prompt and marked, and that it reaches a peak comparable to that attained after the introduction of antitetanic serum. Unfortunately, work now being done in our Clinic on this material raises grave doubts as to the promptness of this secondary response and, until further proof is offered, we feel that tetanus toxoid cannot be relied upon to protect patients from the disease.

#### SUMMARY AND CONCLUSION

It has not been my aim or purpose to present a great amount of detail in this paper. I have simply attempted to call attention to the possible seriousness of the symptoms which occur after the administration of foreign sera. At this time I have endeavored to outline briefly the efforts that are being made to find an answer to the problem.

If the need for care in administering foreign sera has been made clear in any degree, I shall feel satisfied that my efforts have not been in vain.

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## A CASE OF ACUTE URINARY RETENTION FOLLOWING THE BITE OF A BLACK WIDOW SPIDER\*

HARRY M. ROBINSON, JR., M.D.

The bite of the black widow spider (*Latrodectus mactans*) produces severe symptoms, which are alarming in their intensity and sometimes prove fatal. A great many cases have been reported by several authors from different parts of the country and in all of them the symptomatology is quite similar. The following case has been reported because of the interesting feature of urinary retention and the immediate relief experienced by the patient following lumbar puncture. Urinary retention is a fairly infrequent finding as may be inferred from a perusal of the literature. Walsh and Hargis (2) have reported two cases in which urinary retention occurred, and which they successfully treated by the use of intravenous injections of 50 per cent glucose and 10 per cent magnesium sulphate solutions. Out of 150 cases reported by Bogen (5) urinary retention was found in several of them. However, these men do not state the duration of the retention, nor whether the relief was immediate upon treatment or not. In Blair's (4) experiment upon himself he did not experience any retention of urine but did notice a marked decrease in the amount excreted.

The case is as follows:

The patient, an elderly, white male of 67, was admitted to the hospital on September 15, 1935 at 7:30 P.M. His family history and past history are noncontributory. At 3:00 P.M. on the afternoon of admission he had been sitting in the grass near some trees when he felt a sharp, stinging sensation in the region of the sacrum. He reached behind his back and pulled off a black spider which had a peculiar bright red, hourglass marking on its ventral surface. He immediately called some friends to take him to a physician. Fifteen minutes later he had terrific pain in his lower back which radiated around to the front of his body. After a lapse of one hour he arrived at a physician's office where one-quarter grain of morphine was injected hypodermically. From there he was sent directly to the hospital. The morphine received from the outside physician did not relieve him at all and on arrival at the hospital he was given another injection of one-quarter grain. On admission he complained of excruciating pain in his entire abdomen and tossed about in the bed in an attempt to throw it off. The pain now involved his entire abdomen and to a slight extent his chest in the region of the precordium. It was evident that the morphine had given him no relief. He expressed a desire to void but could not start the stream and because of this, in addition to his other symptoms, he was in extreme discomfort.

*Physical examination:* A general survey reveals a fairly well nourished and well

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\* From the Department of Medicine, University Hospital.

developed white male, markedly dehydrated and evidently in severe pain. He is twisting and turning about in the bed and efforts to quiet him are of little avail.

*Eyes:* React sluggishly to light and accommodation. Pupils are equal, regular and central. Extra-ocular movements are normal, no nystagmus.

*Ears:* Well formed. No topi are present. No discharge from the external canal. Hearing good.

*Nose:* Septum is in the midline and intact. Mucous membranes are of good color. No discharge.

*Mouth and throat:* Teeth are very poor. Pharynx is slightly injected, mucous membranes of good color. Tongue not coated.

*Neck:* Trachea is in the midline, no tug present. No adenopathy present.

*Chest:* Respirations are rapid and shallow. The chest is emphysematous and expansion is poor. Fremitus is decreased throughout. Percussion note is resonant both front and back throughout the chest. Auscultation shows a few atelectatic râles at the bases on both sides posteriorly.

*Heart:* The apex beat is not palpable. The heart is not enlarged to percussion. Sounds are clear cut. No murmurs or arrhythmias are heard. The peripheral vessels show marked sclerosis. On admission the blood-pressure was 190/70 and the pulse rate 60.

*Abdomen:* There is a boardlike rigidity of the recti muscles, but with all this intense rigidity of the entire abdominal musculature there is no tenderness whatever. The upper border of the bladder is within an inch of the umbilicus. (Patient has the desire to void but cannot initiate the flow.)

*Extremities:* Numerous excoriations covered with blood crusts are seen on both lower extremities.

*Reflexes:* Superficial abdominal reflexes are absent. Deep reflexes (biceps, patellas and triceps) are active. Babinski, Oppenheim and Konig are negative.

*Back:* Over the lower portion of the sacral region in the center of the back there is a very fine puncture wound surrounded by an erythrematous induration. The entire area is about 1½ cm. in diameter and very tender to the touch.

*Laboratory findings:* Red blood cells, 4,650,000; white blood cells, 16,150; hemoglobin 81%.

*Differential Count:*

Polynuclear leukocytes.....	77%
Small lymphocytes.....	14%
Large lymphocytes.....	5%
Transitionals.....	5%

*Urine:*

Color.....	light yellow
Sp. Gr.....	1.020
React.....	alkaline
Sedim.....	4444
Album.....	none
Sugar.....	none
Casts.....	none
R.B.C.....	none
W.B.C.....	none

*Phthalein:* 45 per cent.

*Blood chemistry:*

N.P.N.....	39
Sugar.....	84

*Serology:* Negative.

*Spinal fluid:*

Wasserman.....	negative
Mastic.....	0000022222
Globulin.....	negative
Cell count.....	2
Sugar.....	66 mgm. %

Temperature on admission 100.5, pulse 60, respirations 26.

The patient brought the spider to the hospital where it was identified as one of the *Latrodectus mactans*. This spider was entirely black except on its ventral surface, where there was a bright red, hourglass marking on the abdominal segment. It had eight jointed legs.

*Course in the hospital:* On admission to the ward the patient was given 25 per cent hypertonic glucose intravenously, but this apparently gave him no relief. Shortly afterward the patient was taken with a severe, shaking chill which lasted practically one hour. When the chill came on his body was immediately surrounded with hot water bottles, which seemed to give him some temporary relief. After the chill was over he complained of severe substernal pain, pain in the back of his neck and increased pain in the abdomen and lower back. His distended bladder was causing quite severe pain, more marked now than before. He was given a warm soapsuds enema with the idea in mind that it might stimulate him to void as well as cause evacuation of his colon. However, this proved ineffectual in both respects. A rectal examination made at this time revealed no abnormalities; the prostate was normal in size and consistency and there was no fecal matter in the rectum.

The substernal pain seemed to subside after about an hour but returned again around 11:00 P.M.; at midnight he was rolling and tossing about in bed in an effort to throw off the pain. He was given one-quarter grain of morphine but it failed to quiet him. At this time his entire body was covered with a profuse perspiration which saturated the bed clothing. His face, neck and extremities were dry, but his trunk and genitalia were wet. At 4:00 A.M. he complained of terrific pain in his lower abdomen and expressed a desire to void. As he could not perform this act voluntarily he was prepared for catheterization and 1200 cc. of dark yellow urine was slowly withdrawn. Following catheterization the patient experienced much relief and managed to fall asleep. His pulse rate fell to 60 at 9:00 A.M. and he was given an ampule of caffeine with sodium benzoate.

On the morning of the 16th there was slight relaxation of the abdominal musculature but marked pain was still present. The patient was again given 250 cc. of 25 per cent glucose intravenously and an hour later felt much better because to a great extent his substernal pain had disappeared. At 4:00 P.M. of the same day his temperature was 101°F and, although he complained of much pain, he was quiet.

At 7:00 P.M. he wanted to void but could not do so. There was a slight dribbling of about one dram at this time and it was necessary to catheterize him again. Later in the evening he had a severe headache which was relieved by the use of  $\frac{1}{2}$  grain of codeine sulfate and 5 grains of amidopyrine pyramidon. He slept well until the next morning. His abdomen was somewhat relaxed by this time but the bladder was quite distended and he still could not void voluntarily. Although his abdomen was relaxed he still suffered from marked pain which had become generalized and affected all portions of the body. Later in the day it became necessary to catheterize him again and on the advice of the genito-urinary department a retention catheter was inserted.

On the following morning the genito-urinary surgeons cystoscoped the patient

but found only a benign hypertrophy of the prostate and a low grade cystitis. On his return from cystoscopy he still could not void and had to be catheterized. The pain in his abdomen and extremities was still present.

The next morning a lumbar puncture was performed and 12 cc. of clear fluid were removed under no increase in pressure. The findings of the spinal fluid are set down under the heading of laboratory findings. Following the spinal puncture there was complete remission of symptoms; his urinary function returned to normal, the pain disappeared from his abdomen and extremities, and his feeling of apprehension disappeared. The patient was discharged as cured on September 27, 1936.

#### COMMENT

Various methods of treatment have been recommended by the several authors and claims have been made as to their value, the principal end point being to aid elimination of the toxin from the body and relieve the pain as far as possible. The fact that morphine is ineffectual in the relief of pain has been readily demonstrated in this case. Blair (4) subjected himself to hot tubs and experienced much relief from his pain. Frawley and Ginsberg (3) have claimed beneficial action by the use of intravenous injections of 50 per cent glucose and 20 cc. of 10 per cent magnesium sulfate solutions. Bogen (5) states that a number of measures are required depending on the case in hand, and that these measures are: sedation, hot packs, hot tubs, catheterization, gastric lavage, intravenous glucose, intravenous magnesium sulfate, etc.

The use of spinal puncture in the treatment of spider bite cases is mentioned briefly by Blair (4) as, "Spinal puncture is said to give relief in many cases." In the case just described spinal puncture was the only measure used which gave the patient any definite relief. It should be noted that the removal of spinal fluid not only relieved his pain but that his urinary function returned to normal following this procedure.

#### SUMMARY AND CONCLUSION

1. A case of arachnidism caused by the bite of the *Latrodectus mactans* in which the patient had acute urinary retention is presented.
2. None of the measures used gave the patient relief until spinal puncture was performed.
3. Spinal puncture should be recognized as being of definite therapeutic value in the treatment of black widow spider bite.

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## THE OUTPATIENT DEPARTMENT\*

ARTHUR J. LOMAS, M.D., C.M., D.P.H.

For a very few minutes only I propose to discuss some circumstances in our dispensary service throughout the State of Maryland, but especially in the City of Baltimore. I am not going to burden you with statistics or any other details but will endeavor to hold my remarks to a few general facts.

Fifty years ago very little was known about Outpatient Departments of hospitals. There were, of course, the Philadelphia Dispensary, founded in 1786, the New York Dispensary, founded in 1791 and the Boston Dispensary, founded in 1796. These institutions were maintained by philanthropically inclined citizens. Admission and treatment were obtained by presenting a card from such an interested citizen or contributor.

We have observed that during the last few years our whole social order has been undergoing a change. Old landmarks have shifted and we have been told that a new day is dawning. Those of us who have had the opportunity of watching dispensary service during these years need no assurance on this point as the change has been rapid and definite.

Time was when a small group of doctors were very willing to devote a considerable number of hours per week to their particular clinic. These clinics were few in number and were simple places where the patients were carefully examined and treatment prescribed. A few notes were carefully made; perhaps in some particular case extensive observations were noted, but generally things went along quietly and soberly. A short, cursory examination and the dispensing of drugs constituted the service, hence the name "dispensary." During the last quarter of the 19th century, however, a number of teaching clinics were established by medical schools where office practice might be simulated and conditions in their early forms could be encountered and studied.

In 1900 there were probably 150 clinics in this country. In 1921 there were 3,944 Outpatient Departments of hospitals and independent clinics. In 1931, according to a statement on Outpatient Service presented in the Hospital Number of the Journal of the American Medical Association, the number had risen to 7,727. This number included the Outpatient Departments of hospitals, independent clinics, group and industrial clinics.

\* Read before the Medical and Surgical Faculty, April 28, 1937.

The situation which we have facing us today in our dispensary service is one which demands our serious attention. I think we might best review this situation by considering the various details under three headings: The Doctor—The Patient—and The Institution.

#### THE DOCTOR

Service in an Outpatient Department does not exist and grow unless there is a definite need for it. The physicians, without whose services—free services—no clinic could exist, would not give plenteously of their time without being satisfied of its need. Physicians, in fact, have been primarily responsible for the development of our Outpatient Service.

One fact must always receive serious consideration when discussion of dispensary service is undertaken, and that is, *the doctor must make a living*. He must attend to his private work, come what may. The doctor, in all seriousness, may plan to maintain regular attendance at his clinic but as he *proposes* so his patient *disposes* and, as he is not always his own master, considerable irregularity in attendance results. This means disappointing several patients or many patients, or even sending a group away to return some other time. It has become exceedingly difficult to discuss this irregularity with the doctors concerned. While some regularity must be maintained, the doctor needs every consideration possible. As I see the situation, this irregularity can only be obviated by the establishment of medical personnel on a salary basis, so that regular attendance at stated hours in certain key clinics may be demanded. Extra dispensary interns or even fellowships in the various departments may fill a definite need. With the new specifications that are being set up for the standardization of the specialties it is quite possible that some relief may be found for those hospitals qualified to offer this type of resident service. The fact is obvious, however, that in order to do these things the increased cost must be forthcoming from some definite source.

A second fact must be kept in mind by the public, by many of our large business concerns and especially by city officials. This outpatient work is voluntary on the part of the doctor and has been for a long while back. I feel that many doctors like to give this service in the spirit of aid to the needy. It is true that through this service many of our younger men enjoy staff privileges and association in a group with other medical men interested in their special clinics, but on the whole I feel that doctors like to *give* this service.

Much can be forgiven in the underprivileged, sick patient who, through ignorance or sickness, may be overbearing. However, it is

too much when our corporations and civic officials, or the public generally, demand, expect or attempt to dictate the manner in which these voluntary dispensary doctors carry out their fine service.

I feel, however, that in the last few years, with our social upheaval and the increased demand for free attention, dispensary conditions have passed from the ordinary service into the development of large organizations supplying medical care to the sick poor. Furthermore, they relieve the City, State and even the Federal Government of an obligation that is most truly theirs, with no consideration from these authorities for the doctors doing the work or the institution providing the means. The exception to this is, perhaps, the request to fill out the never-ending governmental forms and reports. I contend that this is not the purpose for which the doctor is willing to give his time freely. A New Deal is necessary here as elsewhere.

If we expect our dispensary staffs to be regular in attendance and to devote considerable time, energy and skill in the proper examination and treatment of the indigent, it is necessary that departments be adequately equipped so that their routine, while being reasonably scientific, may be as reasonably expedited. For instance, a considerable number of doctors hesitate to write notes, and therefore require a clinic secretary to take dictation. This is a logical request in consideration of the large number of patients to be interviewed and the necessity for much recording of observation and treatment. However, here is a secretarial expense of very considerable proportion and one that the average dispensary cannot afford.

Many clinics require a proper social history with reports on home conditions and social details properly recorded. This means an extension in the Social Service personnel. If our work is to be done in a modern manner, and proper contact with social agencies is to be maintained, this particular service must be properly organized.

Many of our diagnostic procedures are elaborate and expensive. The clinical laboratory must have its staff of properly trained technicians. The X-ray Department must provide special services for the Outpatient Department. The staff in the Allergy Clinic requires a technician to insure an adequate supply of the special biologicals and reagents which are in constant use. The Diabetic Clinic needs the services of a special dietitian to direct the gastronomic activities of the patients. Cardiology requires its electrocardiograph, with its own technician. Gynecology and Oncology must have radium or its emanations, or at least some special arrangements for deep therapy. There was a time when we were well equipped if we had a fluoroscope in the Department of Roentgenology. Now, in addition to vertical

and horizontal fluoroscopes, in the radiographic division we require an additional fluoroscope in a well-equipped medical clinic as well as in the fracture clinic.

Consider the never-ending routine examination with the elaborate consultation setup and expensive treatment that is essential in a modern syphilis clinic. In this consideration bear in mind that the routine includes colored and white, male and female, infant, child, adult, prenatal and postpartum, cardiological, neurological and several other types of patients. It is easily apparent, then, that with this never-ending increase in the various types of service, the elaborate clinical procedure and expensive equipment, beside the necessity for a constant increase in the paid personnel, the situation has gone beyond bounds.

#### THE PATIENT

I feel that there never has been a time when the general public was as health-conscious as it is today. There are, of course, quite a number of reasons for this. It is difficult for the average citizen to go through his daily routine without being constantly reminded of some feature having a definite bearing on his physical well-being. Our daily newspapers are weighted down with items offering nearly everything from pink layettes to choice lots in the National Memorial Parks. All day long, weekdays and Sundays, our radios announce the various achievements that are supposed to contribute to a sound mind and a healthy body. The magazines and various publications, not to be outdone, have developed their advertising in the various health-giving agencies to such an extent that these have become works of art well worth consideration.

This, of course, all means that the average dispensary patient is no longer satisfied with a *rubbing on medicine* or some *healing salve*. Most of these patients tell the doctor what they want at their first interview and the less expensive the service the more they tell.

They are quite familiar with x-rays, the needle treatment and blood tests. Even recently I heard a gentleman of color ask if he should not receive an injection to prevent blood poisoning in a simple wound of the forearm. He had heard of A. T. S.

The dispensary patient is demanding more and more a type of service the cost of which he neither knows nor cares about. It is a fact that if the majority of these patients had to pay for some part of their treatment, while they would be just as demanding, the institution would be in a better shape financially to provide proper equipment for the staff and adequate remuneration for the personnel.

It is not the simplest thing in the world to determine who should be admitted and who should not. We all know there are quite a definite number of people who are accepted by our admitting offices who should not be admitted for treatment. One must be doubly careful lest some unfortunate is refused who probably needs the service very much. These patients are frequently very ill and it is not humane to be too exacting at such a time. There are many, a great many, I find, who willingly pay some small charge but can ill afford to do so. On the other hand, there are a considerable number who can pay an amount below the usual office fee but more than a dispensary charge. It would seem desirable to place many of our young physicians on a salary to handle this type of case as well as others under dispensary conditions, and thus a double service might be provided.

#### THE INSTITUTION

For a number of years most hospitals have tried to do something either great or small for the ambulant patient. Some of the institutions have developed tremendous Outpatient Departments, others have got along with perhaps little. This service, as a rule, required financing through private philanthropy, or it has been financed from the funds of the institution augmented by special gifts of one kind or another.

As long as this service was small and easily handled, no great burden was felt. If at any time it was necessary to suspend this service through adverse conditions, no very great discomfiture was caused. With the development of these crowded clinics today, and especially through the lean years when the low-salaried group and the unemployed were compelled to seek free medical assistance, it can be well understood that the resources of the various institutions have been taxed to the utmost.

No attempt has been made by the City or State to assume financial responsibility for this work. It is quite true that some feeble efforts have been made in the establishment of City Clinics, but it is noticed that as soon as budgetary restrictions are necessary the City promptly closes many of its clinics and diverts these needy people to the various hospital dispensaries.

Even in the new division of the City Hospital which was recently erected no attempt was made to develop an Outpatient Department, except for a few of their own cases that were recently discharged who may return for observation. In this vast sweep of the eastern limits of the City, one would have thought that such an institution should have been provided for the care of ambulant cases.

The Federal Government, through the eminent services of the Honorable Harry Hopkins, absolutely denied financial assistance for hospital service. Mr. Hopkins stated clearly that the Federal Government was concerned with feeding, clothing and housing the needy, but that medical care was a local problem. It must be remembered, however, with grateful appreciation, that the Administrator of the National Relief Agency for Maryland did everything in his power to aid the dispensary situation, and that he stretched the interpretation of Mr. Hopkins' ruling to the limit to provide at least something for the dispensary service and, in a few cases, for the doctors. It is also true that at present the Board of Welfare is partially paying for certain cases. I feel that in the absence of some definite policy they are sympathetically doing what they can.

It is an extraordinary thing, however, that everybody from the Mayor down through the offices of Welfare and State Aids, etc., and all personnel, lay and professional, receive a salary for passing the needy, sick patient on to where he will get relief, and when he arrives there the salary suddenly stops. Nothing is provided for the doctor and nothing for the medical supplies. This, to my way of thinking, is not good administration.

It is not necessary to remind an audience of this kind of the large expenditure of money in buildings, equipment and pay rolls. It seems to me that we have made too much use of the unfortunate expressions "free service" and "free patient." We seldom stop to think that there is no such thing. Somebody must pay.

#### CONCLUSION

The time has arrived when a new policy must be introduced for the operation of the Outpatient Department. There is great need for a proper financial policy based on a reasonable payment for work done. It is high time that both City and State Governments assume their definite responsibility for the care of the sick poor and refrain from the imposition inflicted on the medical profession and on private philanthropy. Leadership and initiative are greatly needed for the formulation of a new plan based on sound professional principles.

Possibly the answer is to be found in the greater development of the hospital as a community medical center, a center where all medical men of a specified locality, including the general practitioners and specialists, might find interest. Here special clinical facilities could be provided for the benefit of the general practitioner and here also might be found a common work place for the preventive as well as the curative fields of practice.

It does not seem too fanciful to me to expect some close association

between the city and town institutions on the one hand and the practitioners in the rural areas on the other, in order that laboratory and consultation facilities may be more readily accessible on a properly organized state-wide plan.

It is apparent that tax funds must form the basis of such support. How much this should be augmented by group payments from the low-salaried and those below the comfort level, or what part the employer should play in the industrial areas, is not for consideration at this time.

I hope that my humble remarks may be the means of bringing about such consideration and that something shall be done under the leadership of this Faculty for the better development of our dispensaries.

## THE MEDICAL SCHOOLS OF BALTIMORE\*

ALEXIUS McGLANNAN, A.M., M.D., LL.D.

BALTIMORE, MARYLAND

The College of Medicine of Maryland found its origin in a riot, and contention was the original sin of its offspring now gathered together in the Medical School of the University of Maryland.

Charles Frederick Weisenthal came from Prussia in 1755 to become the Sydenham of Baltimore. For 34 years he was the leading physician of the town and the most prominent medical teacher of the day. In 1789 his son Andrew, together with Dr. George Buchannan, failed in their attempt to found a medical school, but Andrew Weisenthal continued to teach anatomy and surgery until his death in 1798.

John Beale Davidge was born in Annapolis in 1768. He began the study of medicine as a pupil of Doctors James and William Murray in his native town. Later he went to Edinburg and graduated from Glasgow in 1793. After a short period of practice in Birmingham, England he brought his young Scotch wife to make their home in the newly chartered city of Baltimore during the summer of 1796.

Andrew Weisenthal's classes were successful but ended with his death. The Medical and Chirurgical Faculty, the state medical society of Maryland, began to consider plans for a school of medicine at its second session.

In 1802, one year later, Davidge advertised private courses of lectures on anatomy, surgery, midwifery and physiology. In 1806 James Cocke joined Davidge and John Shaw in their plans for establishing a medical school. Davidge taught anatomy, surgery and obstetrics, meeting his students in a small building which he had erected adjoining his office on the east side of Liberty near Saratoga Street. Here in November, 1807 he secured a cadaver and began a dissection. At that time there was strong, popular prejudice against dissection in Baltimore. Perhaps in this case the proximity of St. Paul's Cemetery, which was only one square away, was too suggestive. For some reason or other a mob of the offended populace demolished the house and its contents to show its opposition to dissection of the human body.

Adverse popular opinion was so strong that Davidge could obtain no redress for the damage done him. This was also true in the case of Doctor Weisenthal when in 1788 the body of an executed murderer was taken by force from his students by the populace of the town.

\* Professor Emeritus of Surgery, University of Maryland School of Medicine.



This time, however, the medical profession was organized and stimulated by the violence lost no time in preparing the charter which passed the Legislature on December 18th, 1807 and founded the College of Medicine of Maryland. The first classes were held in the homes of the professors, but in 1811 it was decided to build a home for the school. Accordingly, a lot at the corner of Lombard and Greene Streets, then the western boundary of the city, was bought from Colonel John Eager Howard. Colonel Howard sold the property to the faculty on credit for \$10,000 and then contributed \$1,000 to the funds of the school. Colonel Howard was, therefore, the first patron of the Medical School and laid the cornerstone on May 7th, 1812. This building, designed by R. Cary Long after the model of the Pantheon, remains the center of the University of Maryland in Baltimore, and today is the oldest building in the United States devoted continuously to the teaching of medicine. In December, 1812 an Act of the Legislature authorized the Medical College to annex other faculties and found the University of Maryland.

Davidge was the first Dean of the Medical School and served as Professor of Anatomy and Surgery. He also substituted in other departments whenever a professorship became vacant. For 22 years he alternated between anatomy and surgery, sometimes holding both chairs, sometimes giving up one or the other to Gibson or Pattison and finally both to Nathan R. Smith, who succeeded him as the dominating force in the University.

Few of these years were free from trouble. Importunate creditors, temperamental professors, who were sensitive of privileges and prerogatives and quarreled with one another or with outsiders, duels, disorderly students and turbulent janitors, all contributed to prevent a contemplative life.

In 1824 a serious difference of opinion as to the right of professors to take classes of students outside the regular courses led to the decision of the regents "that no professor should, during the session of the classes deliver any lecture to the pupils of the College and receive compensation therefor, except officially *ex cathedra*." This decision offended Davidge and De Butts, Professor of Chemistry, who felt it restricted their rights as it certainly did their income. To gain redress they set on foot the movement which led to the supplementary charter of 1825, which took the school away from the Board of Regents made up of professors and placed it under a Board of Trustees made up of laymen appointed by the State.

At the same time another difficulty presented itself, namely, the organization of a rival institution, the Washington Medical College.

After spending ten days in Annapolis in company with De Butts, Nathaniel Potter, Professor of Medicine at the College of Medicine of Maryland, learned of the proposal to change the government of his own school and that his colleague, De Butts, was a prime mover in the scheme. Potter entered the fray with two fights on his hands. Surprised and horrified he expressed his abhorrence to his colleague, who remained silent, and in no uncertain language announced his opinion that the men associated with the proposed new school were too contemptible to deserve the notice of the old one.

Court proceedings decided that the Legislature had exceeded its right and that the original charter was inviolate, but in the years required to arrive at this decision the institution suffered from dissension. For a time two schools, each claiming to be the legitimate one, divided the class of students reduced in number by the controversy and by the attractions of the rival school.

The Washington Medical College began in 1827 in a building on Holliday Street near Saratoga. The school prospered and in 1838 moved to its new building on North Broadway. Those who are acquainted with the Church Home and Infirmary will remember the circular room with the high ceiling in the central building. This room is the remains of the amphitheatre of the Washington Medical College, for whose use the building was erected.

The Washington University was founded with this Medical School as a nucleus. In 1849 it was found that Broadway was too remote and the University therefore built the new assembly rooms at Hanover and Lombard Streets. This project overtaxed the resources of the institution and the sale of the building in 1851 caused its suspension.

Horatio Gates Jameson, the moving spirit in the new Washington Medical College, received his degree with the class of 1813 at the first commencement of the University of Maryland. He was a man of great ability, a skillful surgeon and a good teacher. Early in his career he aspired to a position in the University of Maryland. From a letter written in 1822 it is evident that in one of the exchanges between Davidge and Pattison, Davidge asked Jameson to assist him in his practical surgery before the class. The position did not develop and Jameson joined the group who instituted the new school. He bore the brunt of the antagonism of the Faculty of the old school and was bitterly attacked.

During the memorable winter of 1825-26 when the new school was chartered, Duncan Turnbull, a subordinate in the Department of Anatomy of the University of Maryland, published a pamphlet in which a scurrilous attack was made upon Jameson's private and pro-

fessional character. Jameson treated this attack with silent contempt. However, when the pamphlet was republished in 1828 by Fred. E. B. Hintze, he brought this young man into court and at the trial uncovered and exposed the instigators of the attack. Jameson was completely vindicated by the outcome of the trial. In spite of the vindication the persecution of Jameson had its effect, so that when in 1835 the invitation came he left Baltimore for Cincinnati.

From the suspension of the Washington University in 1851 to the beginning of the Civil War there was comparative peace and harmony in the University of Maryland.

In April, 1860 Edward Warren came from North Carolina to succeed Charles Frick as Professor of Materia Medica and Therapeutics. Thirty-two years of age, physically attractive and mentally keen, he possessed a dash and manner which carried him to high places in an adventurous life. He was well educated, graduated from the Medical School of the University of Virginia and a year later from Jefferson Medical College. Next he studied in Paris with and under Trousseau, Velpeau, Nelaton, Ricord, Charcot and others whose friendship helped him in later years. Soon after Warren had completed his first course of lectures the first blood of the Civil War was shed. This occurred when the 6th Massachusetts Regiment was attacked by a mob as it marched through Baltimore. Warren sent his family to North Carolina and undertook a mission south to obtain arms and equipment for Maryland volunteers. The development of the military situation made it impossible for him to return to Baltimore until after the war was over.

In 1861 some letters were sent by the Faculty to Warren, asking his intentions about returning to Baltimore, criticizing the neglect of his duty at the infirmary and finally notifying him that his chair would be declared vacant on July 25th unless he was heard from before that date. Warren's spirited answers did not remove the difficulty but the chair was not declared vacant until two years later.

Warren served with distinction in the Confederate Army and at the end of the war as a Brigadier General and Medical Inspector of the Army of Northern Virginia.

Returning to Baltimore after the war, he was unsuccessful in his attempt to regain his position in the University. In 1867 with Harvey L. Byrd, Thomas L. Bond and others he reestablished the Washington University and began instruction at the northeast corner of Calvert and Saratoga Streets. He obtained aid from the City and State and popularized the school by a system of scholarships which admitted southern veterans at merely nominal rates. After one or

two sessions an old public school on the northwest corner of Calvert and Saratoga Streets was given to the State by the City, to be used as a hospital and medical school by the Faculty of the Washington University and its successors. This building adjoined the City Spring Park and was converted into a hospital with accommodations for lectures, experiments, etc.

In 1872 dissensions arose in the Faculty. Warren and Byrd withdrew and with Thomas Opie, John Lynch, Peter Goolrich and W. W. Murray incorporated the College of Physicians and Surgeons. The lectures were given in the new assembly rooms, the building erected by the original Faculty of the Washington University in 1849, and in chambers first occupied by the Baltimore College of Dental Surgery. About this time, however, Warren began to lose caste in Baltimore. General Ketchum died under suspicious circumstances and Mrs. Wharton was accused of having poisoned him with tartar emetic. At the trial in 1871-72 Warren was the chief medical expert for the defense and upon his testimony that the death of the General was due to cerebro-spinal meningitis and not to antimonial poisoning, she was acquitted. During this trial Warren made the retort to the prosecuting attorney which has become famous: "You doctors bury your mistakes six feet under the ground," commented the attorney, to which Warren replied, "You lawyers hang yours six feet above the ground."

This case brought Warren great notoriety, far and wide, but it hurt his reputation in Baltimore and ruined his practice. The following spring he left Baltimore to enter the service of the Khedive as Chief Surgeon on the General Staff of the Egyptian Army. Good fortune attended him and as Warren Bey he was the most famous doctor in Egypt. Fearing blindness from ophthalmia, in 1875 he sought relief in Paris under the care of Dr. Landolt. Warned that a return to Egypt would mean the loss of his vision, Warren decided to remain in Paris.

The influence of his youthful friends, Charcot and Ricord, made him a licentiate of the University and he began practice in the French Capitol. A prosperous practice with honors of many kinds from various sources came to him and he occupied a prominent place among the Americans in Paris until his death in 1893.

Dr. Opie was Dean of the College of Physicians and Surgeons from its incorporation until his retirement in 1903. The Faculty was made up of progressive men and the school prospered. In 1874 the Faculty opened the Maternite Hospital on Lombard Street just west of Hanover, the first lying-in hospital in the State. In 1877 the College of

Physicians and Surgeons took over the Washington University School of Medicine and in this way obtained possession of the building at Calvert and Saratoga Streets and control of the City Hospital.

The old building housed the hospital as well as the college. A steep staircase ran from the Saratoga Street entrance to the second floor. The space under this staircase was used as a makeshift city morgue. The dissecting room remained at Hanover and Lombard Streets until the building was remodeled in 1890, at which time the new City Hospital was built by the Sisters of Mercy on the City Spring lot adjoining the College. The Maternite Hospital remained on Lombard Street until the big fire of 1904. About 1881 dissension arose which caused a break in the Faculty of the College of Physicians and Surgeons and in the fall of that year Harvey L. Byrd withdrew and founded the Baltimore Medical College. The cause of this dissension is not plain, but a curious provision of the new school required that "every one appointed or elected a professor or teacher shall declare his belief in the Christian Religion." This provision was doubtless rescinded for in later years the Faculty of the Baltimore Medical College showed a mixture of all religions and no religion.

The Baltimore Medical College started in a building on Paca Street south of Franklin and offered coeducation. Women apparently were not attracted by the invitation because the Women's Medical College was incorporated in the following year.

Later the Baltimore Medical College moved to Linden Avenue, Madison and Howard Streets. This completed a cycle, as the institution occupied part of the grounds of the first almshouse of Baltimore where clinical instruction was given to the first classes of the Medical School of Maryland.

The Johns Hopkins Medical School began its existence entirely independent of the other schools. The original endowment was inadequate and for several years teaching was limited to a few post-graduate students in the hospital. In 1892 Miss Mary Garrett contributed the necessary funds on condition that women be admitted on the *same* terms as men. When this contract was prepared by the Trustees it read that women were to be admitted on *equal* terms with men. Miss Garrett objected to this phraseology and insisted that the contract should be on the *same* terms as men and it was so amended.

Doctor Welch was the first of the Medical Faculty to come to Baltimore. He received a warm welcome, his course in pathology attracted the best doctors of the city and he promptly became an influential and important member of the medical profession of Baltimore.

Doctor Welch facetiously attributed his warm welcome and popularity to the fact that he came to Baltimore as a pathologist and not as a rival practitioner. That the Baltimore men were not so narrow is shown by Osler's adoption a few years later. It is true that Doctor Osler had the advantage of having his way prepared for him by Doctor Welch.

While Osler's personal qualities and accomplishments were unquestionably the source of his great and lasting good influence on the profession in Baltimore, some small credit must be given to the men and women who were ready to receive it.

Unfortunately, Doctor Welch is no longer with us. However, those who attended the opening of the Welch Library and the inauguration of the Professor of Medical History saw that "age could not wither nor custom stale his infinite variety."

Early in the 20th century the pressure on the unendowed medical schools began to be felt. Higher entrance requirements and longer and more expensive courses put the cost of medical education beyond the ability of the student to pay. Endowment or State aid became necessary. The Baltimore Medical College was the first of the three medical schools to succumb to the pressure. In 1912 it was joined to the Medical School of the University of Maryland. In 1915 the Faculty of Physic of the University and the Faculty of the College of Physicians and Surgeons realized that neither of them could continue to exist alone and united under the title of University of Maryland School of Medicine and College of Physicians and Surgeons. With a small endowment and a State appropriation, and by strict economy and much sacrifice the new Faculty carried the school through the years of the Great War.

Through the activity of the Medical Faculty the professional schools in Baltimore were united with the Maryland State College of Agriculture at College Park in 1920 to create the University of Maryland as a State Institution.

At the present time the Medical School of the University of Maryland enjoys a comparatively happy existence. There are no dissensions in our Faculty. We are on cordial relations with the Johns Hopkins Medical School. There is a free exchange of ideas and material between the two schools and some interlocking of personnel.

When we remember the lean years of strife and contention that marked the past, we hope that our present era of unity, peace and concord foretells prosperity and greater usefulness for both institutions.





Harry Adler



# BULLETIN

OF THE  
SCHOOL OF MEDICINE, UNIVERSITY OF MARYLAND

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## HARRY ADLER, A.B., M.D.

Dr. Harry Adler, associated with the University of Maryland for many years, died on November 1, 1937 at the age of 65 years. He had been ailing for fifteen years with cardiac disease but continued his practice without interruption.

Dr. Adler was educated in the public schools of Baltimore, took his baccalaureate degree at Johns Hopkins University in 1892 and received his medical degree at the University of Maryland in 1895. He studied later in Berlin, Vienna and Prague in preparation for advanced work in gastro-enterology. He was Demonstrator in Clinical Pathology (1899-1901), Associate Professor of Diseases of the Stomach (1901-1906), Associate Professor of Diseases of the Stomach and Director of the Clinical Laboratory (1906-1909), Clinical Professor of Medicine (1909-1911), and Professor of Therapeutics and Clinical Medicine (1911-1913). In 1913 he became a Trustee of the Endowment Fund, a position he held until his death.

In addition Dr. Adler was active at Sinai Hospital and the new hospital was built and reorganized under his leadership. It was not until illness overtook him that he permitted less serious thoughts and occupations to interest him. Dr. Adler became a traveler, spent much time in Florida and learned to play golf there. He used the game as a recreation and never played beyond his strength. His attitude to this diversion was most scientific and he studied it as he would a medical problem, fitting it to his own physical condition. He enjoyed it thoroughly and added to his years by the mental relaxation it afforded him. Dr. Adler was not an effusive man but was communicative and helpful to his close associates. Whatever he undertook he accomplished, studying every side of the subject as if it were a scientific medical problem. He greatly enriched the lives of those who came in close contact with him and they will miss a great, constructive educator and friend.

SYDNEY M. CONE, M.D.

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The names listed above are officers for the term beginning April 15, 1937, and ending June 30, 1938.

## ITEMS

Dr. Eva Dodge (U. of M. 1925) has accepted a position as a member of the State Health Department of Alabama. Upon graduation Dr. Dodge interned at the University Hospital, where she became resident obstetrician the following year. She then furthered her studies abroad. Upon her return Dr. Dodge settled in Winston-Salem, North Carolina and specialized in the field of obstetrics and gynecology. In this work she cooperated with the public health departments of the State and Forsyth County and during the past three or four years has directed prenatal clinic work for this county. About eighteen months ago this work was expanded to become a tricounty project with clinics held in Forsyth, Yadkin and Stokes Counties in North Carolina. The University of Maryland, her friends and colleagues wish Dr. Dodge continued success in her new undertaking.

Dr. C. A. Clapp (U. of Md. 1902) addressed the North Carolina Medical Society on May 11, 1937 and also gave a course on the Treatment of Cataract in the Postgraduate Course in Ophthalmology and Otolaryngology in Washington, D. C. on May 31, 1937.

Dr. Maurice Sullivan announces the opening of his office at 21 East Eager Street, Baltimore, Maryland for the practice of dermatology and syphilology.

Dr. Eugene L. Flippin has opened an office at 319 Medical Arts Building, Baltimore, Maryland for the practice of roentgenology.

Dr. Christopher C. Shaw (U. of M. 1931), Bellows Falls, Vermont, has recently been elected an Associate of the American College of Physicians.

Dr. Abraham C. Leavitt (U. of M. 1934) has entered general practice at 342 Broadway, Everett, Massachusetts. He has recently completed his hospital service at the Boston City Hospital and Cambridge City Hospital.

### COMMUNICATIONS

Dr. Bocanegra Lopez,  
131 West 110th Street,  
New York City.

November 29, 1937

Mrs. Ruth Lee Briscoe,  
Librarian, U. of Md.,  
Baltimore, Md.

Dear Mrs. Briscoe:

Reading over the interesting text of our Bulletin of the School of Medicine I was saddened by the premature death by accident of our dear friend Nathan Winslow. Last June, on the occasion of the annual commencement, I had the opportunity of seeing him for the last time and it left me the impression of the great man he was.

I also noticed the passing away of my classmate Roscoe S. K. Hangan in Quincy, Mass. He was of the class of 1916.

Will you please convey to both families my sincere condolence? I am unable to do so personally because I do not know their addresses.

Sincerely yours,

E. N. Bocanegra Lopez, M.D.

H. W. Knight, M.D.  
Capt. 1, M.S., Retired  
Bostic, R-1, N. C.

Dr. Clyde Alvin Clapp,  
513 N. Charles Street,  
Baltimore, Md.

Dear Doctor:

\*\*\*\*\* You will find my name in the B.M.C. list of 1903 and as a sub on the football team under the name of "Buffalo". I recall you as a demonstrator, I believe.

Since those days I have been in West Africa as a missionary and in 1916 I went to Bengal, India. In 1917 I was accepted as an officer in the Indian medical service, seeing service on the northwest frontier of India with the 11th Lancers and the 1/XXI Punjabis. Later I saw service with the 1/XXI Punjabis in Egypt and Palestine, being in the last battle. I was demobilized with two years' service, retention of rank and general service and victory medals. On my return to India I served as a missionary in Bengal and Hyderabad State, received the Kaiser-i-Hind medal for public service in India and returned to the United States in 1927. I was Superintendent of Flint Goodridge Hospital for five years and since 1933 I have been in country practice in the mountains of Western North Carolina. Thus you can see that there has been much spice in my life.

Sincerely,

H. W. Knight, M.D.

#### NOTICES

The Sixty-Seventh Annual Meeting of the American Public Health Association will be held in Kansas City, Missouri on October 25-28, 1938. Dr. Edwin Henry Schorer, Director of the Kansas City Health Department, has been appointed Chairman of the local committee and will be assisted by a large group of city and state officials and community leaders. Among the affiliated associations which meet with the American Public Health Association are the following:

- The American Association of School Physicians
- The Association of Women in Public Health
- The Conference of State Laboratory Directors
- The Conference of State Sanitary Engineers
- The American Association of State Registration Executives
- Delta Omega
- The International Society of Medical Health Officers

#### MISSISSIPPI VALLEY MEDICAL SOCIETY AWARD

The Mississippi Valley Medical Society offers a cash prize of \$100.00, a gold medal and a certificate of award for the best unpublished essay on a subject of interest and practical value to the general practitioner of medicine. Entrants must be ethical licensed physicians, residents of the United States and graduates of approved medical schools. The winner will be invited to present his contribution before the next annual meeting of the Mississippi Valley Medical Society (September 28, 29, 30, 1938), the Society reserving the exclusive right to first publish the essay in its official publication—the Radiologic Review

and Mississippi Valley Medical Journal. All contributions shall not exceed 5000 words, be typewritten in English in manuscript form, submitted in five copies, and must be received not later than May 15, 1938. Further details may be secured from

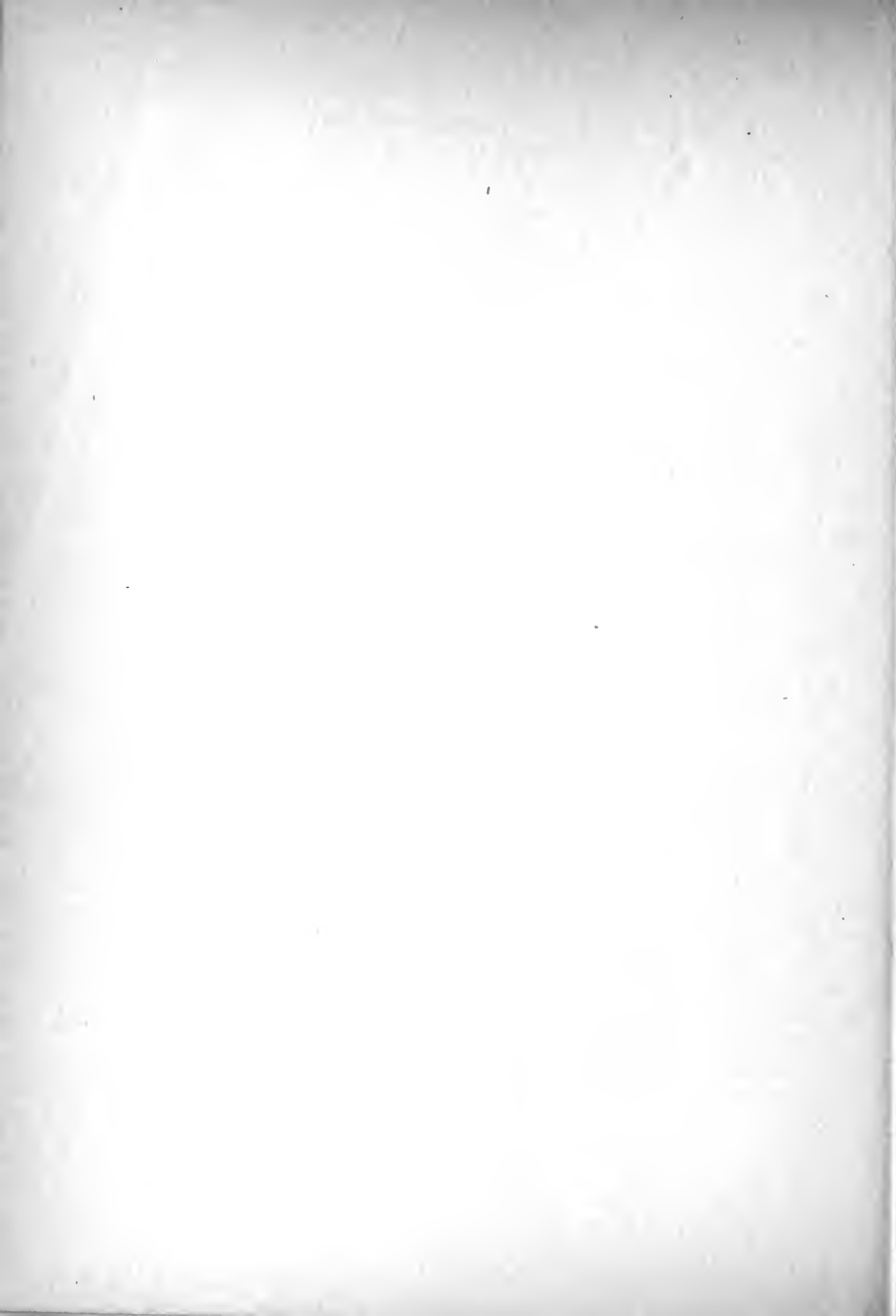
Harold Swanberg, M.D., Secretary,  
Mississippi Valley Medical Society,  
209-224 W. C. U. Building, Quincy, Ill.

Plans are in progress for the annual luncheon-meeting of the New England Alumni to be held on June 1, 1938 in Boston in conjunction with the annual meeting of the Massachusetts Medical Society. Three alumni from Vermont, Connecticut and Maine have already accepted invitations to serve on the committee consisting of six alumni, one from each of the six New England states, which will complete arrangements for this function. It is expected that one of the Baltimore alumni prominently identified with the medical school and hospital will be the guest speaker. Further announcements will be made in the Bulletin and by letter in May. Dr. Charles E. Gill (U. of Md. 1927), 519 State House, Boston, Massachusetts, is Secretary-Treasurer of the Massachusetts Alumni of the University of Maryland Medical School, Baltimore Medical College and College of Physicians and Surgeons.

## DEATHS

- Bacevicze, Anthony Mathew**, Elizabeth, N. J.; B. M. C., class of 1900; aged 66; died, August 10, 1937, of malignant tumor of the pancreas.
- Baker, Sydney J.**, Richmond, Va.; P. & S., class of 1890; aged 73; died, August 7, 1937, of strangulated hernia.
- Biddle, James Kester**, Bend, Ore.; P. & S., class of 1909; served during the World War; formerly coroner of Richland County, Ohio; aged 53; died, July 25, 1937, in a local hospital.
- Bowers, John W.**, Portland, Me.; P. & S., class of 1882; aged 76; died, December 7, 1937. He was the last New England alumnus of the class of 1882 and the oldest alumnus of that school in New England.
- Brown, Clayton Allen**, Redgate, Md.; B. M. C., class of 1897; aged 66; died, August 14, 1937, of coronary thrombosis, cerebral hemorrhage and arteriosclerosis.
- Caldwell, William E.**, Suffield, Conn.; B.M.C., class of 1894; local health officer and a member of the Connecticut State Medical Society and the American Medical Association; aged 67; died, August 18, 1937.
- Clyburn, William Richard**, Camden, S. C.; class of 1890; aged 69; died, August 11, 1937, of coronary occlusion.
- Collison, Frank Jerome**, Bluefield, W. Va.; P. & S., class of 1888; aged 69; died, August 8, 1937, of acute pancreatitis.
- Conroy, Timothy L.**, Baltimore, Md.; P. & S., class of 1892; aged 72; died, August 30, 1937, of coronary thrombosis.
- Doran, John M.**, Chelsea, Mass.; B.M.C., class of 1907; member of the Massachusetts Medical Society, school medical inspector for the Chelsea Board of Health, and president of the staff at the Chelsea Memorial Hospital; aged 53; died, November 13, 1937.
- Falvey, Humphrey John**, Worcester, Mass.; B.M.C., class of 1901; aged 62; died, September 4, 1937.
- Ford, William C.**, Woodstock, Va.; P. & S., class of 1896; secretary of the County Board of Health, for many years county coroner; member of the County School Board and Town Council; aged 71; died, July 8, 1937, of carcinoma of the stomach with metastases.
- Griffin, Cicero Frank**, Suffolk, Va.; P. & S., class of 1893; aged 68; died suddenly, August 4, 1937, of coronary thrombosis.
- Hall, Frank Jerome**, Takoma Park, Md.; P. & S., class of 1897; first president of the Board of Education of Dallas, Tex.; aged 64; died, June 23, 1937.

- Hanigan, Roscoe S. K.**, Quincy, Mass.; class of 1916; served during the World War; aged 46; died, July 30, 1937, of chronic nephritis and cerebral hemorrhage.
- Hatfield, Daniel Samuel**, Washington, D. C.; class of 1922; aged 40; died, August 5, 1937, of chronic myocarditis.
- Havens, Walter P.**, Asbury Park, N. J., B.M.C., class of 1904, died November 14, 1937, of tuberculosis.
- Hawkins, Alexander Stephens**, Clermont, Fla.; P. & S., class of 1879; aged 86; died, July 22, 1937, in the Umatilla (Fla.) Hospital, of bronchopneumonia.
- Hewitt, Charles**, Wakefield, Kan.; class of 1868; aged 92; died, July 9, 1937, of heart disease.
- Hill, William Lee**, Lexington, N. C.; P. & S., class of 1893; aged 73; died, June 10, 1937, of senile dementia and malnutrition.
- Irwin, George G.**, Mount Holly Springs, Pa.; P. & S., class of 1892; aged 77; died, July 10, 1937, of coronary thrombosis and chronic myocarditis.
- Larsen, Aubrey Michael**, Los Angeles, Calif.; P. & S., class of 1913; Lieutenant Commander, M.C., U.S.N., retired; aged 48; died, November 5, 1937, of pneumonia.
- MacNeil, Charles S. J.**, Malden, Mass.; B.M.C., class of 1909; aged 57; died, June 29, 1937, of pneumonia.
- Mahone, Paul James**, Seattle, Wash.; P. & S., class of 1907; served during the World War; aged 55; died, June 30, 1937, of cardiac disease.
- Matheson, James Pleasant**, Charlotte, N. C.; class of 1905; aged 58; died, August 5, 1937, of injuries sustained in an automobile accident near Hartsville, S. C.
- Meyers, Royal E.**, Santa Monica, Calif.; B.M.C., class of 1897; aged 70; died, July 31, 1937.
- Rich, Charles E.**, Lynn, Mass.; B.M.C., class of 1902; member of the Massachusetts Medical Society and the American Medical Association; aged 64; died October 2, 1937.
- Robbins, E. E.**, New Bedford, Mass.; B.M.C., class of 1896; aged 76; died, December 21, 1937.
- Showalter, Ulysses W.**, Clarksburg, W. Va.; B.M.C., class of 1892; aged 79; died, July 13, 1937.
- Wheeler, Edwin Miles**, Baltimore, Md.; B.M.C., class of 1896; aged 67; died, October 13, 1937.





# BULLETIN

OF THE

## SCHOOL OF MEDICINE

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UNIVERSITY OF MARYLAND

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Vol. 22

APRIL, 1938

No. 4

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### HODGKIN'S DISEASE

GRANT E. WARD, M.D., F.A.C.S., AND E. EUGENE COVINGTON, M.D.  
BALTIMORE, MD.

The Oncological Clinic of the University of Maryland was organized in 1930. Since that time an average of about fifty patients with tumors of all types have been seen each week. Most of these are consultation cases referred from the other services of the University Hospital and dispensaries, and from physicians in Baltimore and throughout Maryland. This paper will be limited to a study of thirty-three cases of lymphogranuloma or Hodgkin's disease, the total number in the entire hospital. Most of these have been seen in the Clinic since 1930. Because the number is small and several cases are still under observation, a statistical summary will not be given. Emphasis will be placed on clinical characteristics, the pathology and therapy of Hodgkin's disease, and a comparison of our observations with those in the literature.

#### HISTORY

In 1832 Sir Thomas Hodgkin (26) reported the cases of seven patients, all of whom died from a disease in which enlargement of the cervical nodes seemed an important feature. It was not until 1865 that Kundrat, a pupil of Hodgkin, gave this clinical syndrome the name "Hodgkin's disease." Kundrat also was the first to differentiate this disease from lymphosarcoma. After a study of the literature and Hodgkin's own material, Sternberg and Reed decided that only three of the original seven cases would fit the present conception of lymphogranuloma or Hodgkin's disease. Sternberg and Reed in 1898 thoroughly established the pathology and described the cell which has been known since as the Reed-Sternberg giant cell. From

From the Department of Oncology, School of Medicine, University of Maryland.

that time there has been a discussion whether Hodgkin's disease is a true tumor closely related to other tumors of lymph nodes or a chronic infectious granuloma. A number of workers, notably Warthin (14), believed it to be a true tumor, but the majority of observers considered it an infectious granuloma. In 1900 Fraenkel and Much described an organism associated with lymphogranuloma, from which they made an autogenous vaccine. In 1913 Bunting and Yates (10) grew a pure culture of a diphtheroid bacillus from a Hodgkin's lesion and made an autogenous vaccine. These organisms were found by other observers in many types of lymphatic disturbances and even in normal nodes, so that very little significance can be attached to them. No results were obtained from the vaccines. Sternberg thought Hodgkin's disease was atypical tuberculosis. Ewing (22) recently said, "Hodgkin's disease follows tuberculosis like a shadow." L'Esperance (13, 16) believes Hodgkin's disease is avian tuberculosis. She produced a granuloma in chickens, which she thought had the characteristic pathology of Hodgkin's disease and from which she recovered an organism with the cultural characteristics of avian tubercle bacilli. No one has been able to reproduce her results. Granulomas can be produced in chickens by several different organisms, so that at present there is not enough evidence to say that Hodgkin's disease is avian tuberculosis. The present trend of opinion is that Hodgkin's disease and tuberculosis are separate and distinct and have no relation to each other. Several observers have found a higher incidence of tuberculosis in autopsies on people dying with Hodgkin's disease than those dying with other illnesses.

#### INCIDENCE

Hodgkin's disease is not very common, the incidence being about equal in all of the light races, climates and countries. A two-hundred bed hospital averages about one or two cases per year. It usually occurs between 15 and 40 years of age. The youngest case was 8 years old and the oldest 72 years. The duration of life is approximately the same regardless of the age of onset. Children seem to live just as long as older people, which is contrary to the usual rule in malignant tumors. It seems to be more common among white people than colored, three times more common among men than women, and in children (9) below 15 years of age is nine times more common among boys than girls.

#### SYMPTOMATOLOGY

The first symptom is nearly always enlarged lymph nodes; the cervical nodes are most often involved, the left side a little more

frequently than the right, and the nodes in the lower part of the neck slightly more often than those in the upper part. According to the present day literature, and confirmed in our series, approximately 70 per cent of all cases began as enlarged cervical nodes; 10-15 per cent began in the axillae, and in about 10 per cent of the cases inguinal nodes were the first to be enlarged. During the course of the disease 50 per cent of the cases developed either mediastinal or retroperitoneal lymphoid involvement. The authors have never seen the disease begin in the nodes of an extremity, such as the epitrochlear or popliteal. It nearly always begins as one localized, enlarged node, gradually involves others in the same area, and finally before termination it involves the nodes in several areas. Secondary anemia, general malaise, fever, etc. always follow, but it may be several months after the appearance of the lymphoid enlargements, especially if they are superficial ones, before these symptoms appear.

Fever is present at some time during the course of the illness of almost every patient but is probably most commonly seen during the latter stages. Fever (20), associated with lymphogranuloma, was first observed by Morgagni in 1869. However, it was studied more thoroughly and a characteristic remittent type described by Pel in 1887 and Epstein in 1889. Beginning with a normal or subnormal temperature, there will be a steady rise, higher in the afternoon than in the morning, for 4 to 6 days, then a fall by lysis in from 4 to 6 days. After several days, sometimes even several months, a similar course of fever recurs, the peak seldom being above 102°F. This typical Pel-Epstein fever is seen in no other type of lymphoblastoma except Hodgkin's disease. A low grade continuous fever is more common than the Pel-Epstein paroxysms. The cause of fever has never been explained. The theorists who believe Hodgkin's disease is a tumor hold the fever is caused by absorption from broken down lesions, and those who believe it is an infection think the fever is the result of the absorption of bacterial toxins. The authors have noticed it more frequently in the latter stages of the disease, the acute type of disease, the cases with several areas of involved nodes and in those with retroperitoneal or mediastinal involvement.

There is a notable difference in the severity of symptoms in the various lymphoblastomas. The patients with Hodgkin's disease are more sick than any others of this group. As a general rule, they have fever, discomfort and malaise more frequently. Those persons affected with leukemia and lymphosarcoma are often ambulatory, feel fairly well and are likely to follow their usual occupations until late in the course of the disease.

In the review of our limited group of thirty-three cases several symptoms present themselves which are at variance with those reported in the literature. Splenomegaly is given as a clinical sign in 70 per cent of all cases of Hodgkin's disease. The authors have seven cases under observation at present without enlarged spleens and the records show that far less than 70 per cent of such cases have had clinically palpable spleens. When splenomegaly is present it is usually barely palpable, never a large spleen. If a large spleen is found the case is suspected of being some form of leukemia. Much stress is laid on symptoms due to pressure in mediastinal Hodgkin's disease, such as cough, dyspnea and enlarged veins in the neck, arms, etc. It has been observed that the general symptoms of secondary anemia, malaise, fever, etc. are more pronounced and probably precede the pressure symptoms. This may be because of the fact that cases now come to the clinic earlier in the disease than ever before and therefore irradiation is usually begun before they develop mediastinal masses large enough to cause pressure.

Dermatologists have reported skin manifestations in 10 to 25 per cent of all cases of Hodgkin's disease. The authors have had two cases (7 per cent) with skin manifestations, one an exfoliative dermatitis, the other pruritis. In the leukemias an intractable pruritus is fairly common. However, this is uncommon in Hodgkin's disease, although it is the most frequent skin manifestation, usually not severe, and requires no therapy other than the usual irradiation therapy for Hodgkin's disease.

Hodgkin's disease occasionally invades the bone and has been reported in 15 to 20 per cent of all cases (8). The diagnoses have been roentgenological and clinical, with few autopsies. In our thirty-three cases, two (6 per cent) showed involved bone in the roentgenogram, but there were no clinical symptoms except the visible tumor. Vertebrae are most often affected, but in both of our cases the sternum was involved. The authors have had no autopsies showing involved bone.

#### PATHOLOGY

The description of the pathology of Hodgkin's disease by Sternberg and Reed in 1898 holds today. Hodgkin's disease is characterized grossly by enlarged lymphatic nodes and occasionally by enlarged liver and spleen. It usually begins as an enlarged node localized to one area, then later other nodes in the same area become affected, and finally the nodes in many areas. The nodes are first discrete; as they grow larger they become matted together to form large masses.

They never break down and actually fuse together as is frequent with tuberculosis.

The microscopic picture is always the same, regardless of the primary location of the process. The normal architecture of the node is lost and in the earlier stages the changes are those of chronic inflammatory reactions. Lymphocytes are increased and there is a proliferation of the reticulo-endothelial cells, nearly always an increase in eosinophiles, and the characteristic Reed-Sternberg giant cell. This is a large, pale-staining and usually multinucleated cell with a clear cytoplasm. It is seen only in Hodgkin's disease; therefore, its presence is the main criterion to differentiate it from other lymphoblastomata, tuberculosis, chronic lymphadenitis, etc. As the disease progresses the nodes will show more and more proliferation of fibroblasts, with increasingly dense fibrosis, dependent also upon the amount of radiation therapy used. In Hodgkin's disease irradiation therapy produces the most marked fibrosis of any lymphoblastoma, in lymphosarcoma a moderate amount, in lymphatic leukemia only a slight degree, and in normal nodes almost no fibrosis after repeated exposures. It is well to bear this fact in mind when studying histological sections of lymphoblastomata. Ewing (22) classifies Hodgkin's disease into two types: 1—Hodgkin's granuloma, an infectious process with inflammatory reaction predominating, and 2—Hodgkin's sarcoma, which is a true tumor and closely resembles other lymphoblastomata. There is an occasional Dorothy Reed cell, eosinophiles, some increase in lymphocytes, reticular hyperplasia, fibrosis, etc., but the predominating picture is a moderate-sized cell closely resembling an endothelioma or lymphosarcoma cell. Ewing believes that a number of lymphosarcomas and pseudoleukemias should be classified as Hodgkin's sarcoma. It is manifested clinically as a very malignant, rapidly recurring tumor with perhaps only one area of involved nodes. Mediastinal Hodgkin's is probably the best example. In squamous cell carcinoma and, to a lesser extent, adenocarcinoma, we are able to tell the degree of malignancy histologically by a system of grading advocated by Broders and others, but this is not true in Hodgkin's disease. Neither the number of Reed-Sternberg giant cells, the amount of fibrosis, the reticulo-endothelial hyperplasia, nor any other histological criterion helps to indicate the degree of malignancy or predict the future clinical course. A. S. Warthin, because of the uniformly bad prognosis and the similar clinical duration of various lymphoblastomata, believed that the whole group have a common cell of origin and are merely different symptomatic manifestations of the same pathological process. He and others have reported numerous cases in which the original diagnosis

of Hodgkin's disease was changed by subsequent biopsy to some other type of lymphoblastoma, most commonly lymphatic leukemia. Pseudoleukemia has terminated as typical leukemia. Lymphosarcoma has changed to leukemia. Occasionally cases of Hodgkin's disease, especially if associated with a high leukocytosis, would have the diagnosis of leukemia from a subsequent biopsy. Mycosis fungoides, although recognized by dermatologists (3) as a definite clinical and pathological entity with a benign course, has been reported after subsequent biopsies as Hodgkin's disease or leukemia. The authors have not had this experience but mention these observations of others to show the difficulty of histological diagnosis and the uncertainty of our present classification of the lymphoblastomata. Lymphatic tumors are probably the most difficult of all tumors to diagnose histologically. By the microscopic study of a single section of a node it is often impossible to differentiate Hodgkin's disease, leukemia, lymphosarcoma, etc., from simple chronic lymphadenitis.

#### BLOOD CELL COUNTS

Blood counts are of little value in the diagnosis of Hodgkin's disease except to differentiate it from the leukemias. Our most constant finding is a slight eosinophilia (2-4 per cent). There is usually a leukocytosis of about 10,000, with about 70 per cent polymorphonuclear leukocytes, 20 per cent small lymphocytes, 3-4 per cent large monocytes, and 2-4 per cent eosinophiles (17). Leukopenia is fairly common; when the white blood cell count is below 10,000, there is apt to be a relative lymphocytosis. Leukocytosis is most often seen during paroxysms of fever, exacerbations of the disease, etc. As a rule the greater the leukocytosis, the greater the percentage of polymorphonuclear leukocytes present. Very high blood cell counts have been reported, but when the white blood count is above 20,000 subsequent differential blood studies are necessary, for, as Warthin (14) says, these cases may terminate as leukemia. There is usually secondary anemia present, the degree depending upon the duration and severity of the disease.

#### PROGNOSIS

The prognosis of any lymphoblastoma is grave. The usual duration of life is three to four years, varying from three months in acute cases to ten years in chronic cases, with Hodgkin's disease probably the most variable of the group. Leucutia (6) reports 16 per cent of Hodgkin's cases living at the end of five years; Craver (5) reports 14 per cent living five years and 8 per cent living fifteen years, and

Burnam (24) mentions 9 per cent living five years. "Cures" have been claimed by a few observers, notably Burnam (24), who reported twenty-eight "cures." It is significant that fourteen of Burnam's twenty-eight cases had only one area of involvement. The authors have under observation two cases of ten years' duration and another with no irradiation therapy for the past three years. It is possible that in a number of the cases of such long duration the diagnosis was incorrect. No doubt the most frequent mistake made is to call chronic lymphadenitis Hodgkin's disease.

There are several symptoms and signs which, in the experience of the writers, help in predicting the duration of the disease. 1—Fever, either low grade, continuous or frequent paroxysms of the Pel-Epstein type, is a reliable sign of a downhill course. 2—Secondary anemia is always an unfavorable indication. A red blood count of 3,000,000 rarely permits of much improvement by any therapy—irradiation, transfusions, liver therapy, etc. 3—Leucopenia may be observed when the patient is first seen or it may appear during the course of therapy, but little can be done for it. It is serious and probably indicates a lowered resistance. Leucopenia also limits and when severe may prevent adequate irradiation, even when large nodes are present. Heavy irradiation may reduce the white blood count to a dangerously low level. 4—Cases with involvement of mediastinal or retroperitoneal nodes do not live as long as those with superficial nodes. This may be because of the extent of the disease, pressure symptoms or associated systemic symptoms such as fever. Des Jardins thinks fever is always more pronounced when deep nodes are affected. Regardless of whether Hodgkin's disease is of neoplastic or infectious origin, it is logical to believe that the greater the amount of involvement the shorter the duration of life. This is a good rule to follow in prognosis but is not infallible. Autopsy often shows more nodes involved than were demonstrable before death. In previous years pressure symptoms were probably a determining factor in prognosis. This should not be true now as patients are seen earlier, more accurately diagnosed, and treated before large masses appear. The course of this serious malady is rendered much more comfortable with irradiation therapy added to the hitherto limited means of treatment. It is not uncommon to see a case with enlarged cervical nodes live for several years, but it is rare to see a mediastinal or retroperitoneal Hodgkin's disease of long duration.

#### TREATMENT

The treatment of the lymphoblastomata as a group is unsatisfactory. In Hodgkin's disease operation was advised for localized masses

of nodes as late as 1926 (23). No cases were cured by operation but it was thought worthwhile to prolong the interval before reappearance of the nodes. Fraenkel and Much, and Bunting and Yates (10) used autogenous vaccines, followed later by operative removal. Utz and Keatinge (12) advised an antiserum, which was made by injecting a filtrate of Hodgkin's nodes into chickens. Wallhauser and Whitehead, 1928 (18), and later Hanrahan, 1930 (15), described a method of treatment by autogenous filtrate. None of these methods have proved of value and at present the accepted treatments are liver extract and iron for the secondary anemia, and irradiation therapy to control the enlarged nodes.

Irradiation therapy was used only to a limited degree prior to about 1920. Since then, however, its employment has increased tremendously and at present entirely replaces surgery. There are several methods of administering irradiation therapy in lymphoblastomata. Radium pack, high voltage x-ray and low voltage x-ray are used and all are equally efficacious. Prior to 1924 treatments were given at stated intervals of from one week to a month or more, and were centered only over the involved nodes. These treatments were continued at the regular periods, whether the lesions remained palpable or not. In 1924 DesJardins (19, 11, 25) advocated irradiation therapy to all gland areas of possible trouble, including the cervical, axillary, mediastinal, retroperitoneal, inguinal nodes, etc., during each series of treatments. His idea was that irradiation to all nodes, even though not enlarged at the time, would prolong the interval before their reappearance. He still follows this plan. There is no proof, however, that the time interval can be prolonged by any method of therapy, and his view has been practically discarded. Since about 1930 the generally accepted treatment has been irradiation of the involved nodes only, with no therapy to lymphoid tissue that is not enlarged; the irradiation is given only when the nodes become enlarged and not at stated intervals. The type of irradiation, whether low voltage (140 k.v.), high voltage (200 k.v.) or radium bomb, makes little difference in the ultimate results. Low voltage is satisfactory and much more economical for all superficial nodes. High voltage is used for deeper ones, such as mediastinal or retroperitoneal nodes. There is a tendency among radiologists to use high voltage x-ray on many cases that would do just as well with low voltage therapy. Radium is seldom used at present, even in clinics which have large amounts, because the treatment time is much longer than with x-ray. Burnam (24) reports better results with radium than x-rays, and explains them by the greater penetration of the gamma ray and



possibly a more selective action on Hodgkin's disease. Some of his work, however, was done in the early days before modern x-ray apparatuses were developed. Now radium is used only in small hospitals where x-ray is not available and occasionally in the home when patients are too sick to go back and forth for x-ray therapy. The dose of x-ray or radium therapy is about one-half to two erythema doses to each area of involved nodes, distributed over a period of about seven to ten days. The lesions do not entirely disappear and a residual palpable, fibrotic area usually remains. Small doses are preferable to large ones, as they are sufficient to help the patient without doing serious damage and causing early anemia. Large doses may even do harm, especially in mediastinal involvement, by the production of extensive fibrosis with its sequelae. As stated before, the amount of fibrosis in mediastinal or any other nodal involvement depends upon the duration of the disease and the amount of irradiation received. Since this is true, the total dosage will probably have to be increased for each subsequent course of treatments. It is also necessary to bear in mind that the skin will not withstand repeated large doses of irradiation. Hodgkin's disease usually requires several courses of treatment; therefore, the correct dose is the smallest dose that will reduce the nodes to normal size. Care should be used in giving irradiation therapy to acute cases or during paroxysms of Pel-Epstein fever, as even small doses may cause too much radiation sickness to justify its use. Leukopenia is not a contraindication for therapy unless the white blood count is below 3,000. Secondary anemia is also not a contraindication unless the red blood count is below 2,500,000, but it is unlikely that irradiation will improve a case when the blood count is so low. There is a tendency to irradiate advanced cases with fever, marked loss of weight, grave secondary anemia, and sometimes even those almost in extremis, to satisfy the family and family physician who are anxious to do something. It will probably be of no benefit and may even make some of these patients worse.

#### RESULTS

There is a great controversy in the literature about the effect of irradiation therapy on the duration of life in Hodgkin's disease. The general trend of opinion is that life is prolonged about one year. Optimism is always the rule in writing papers, but so far no one has reported a statistical study comparing a series of cases treated with irradiation with a series of untreated cases. The average duration of life was three to four years in this study of thirty-three cases. Most

everyone is convinced that patients are symptomatically better following irradiation. The improvement in general health and the relief of pressure symptoms, such as those caused by enlarged mediastinal nodes, the paraplegia resulting from an involved vertebra, the edema of a leg from a mass of inguinal nodes, or gastro-intestinal symptoms from a mass of mesenteric or retroperitoneal nodes, etc., are by far the greatest contributions of irradiation therapy. It must not be forgotten that an appreciable percent does live for five to ten years. As stated above, the pressure symptoms are not as important in determining the duration of life as the general symptoms of fever, malaise, secondary anemia, leukopenia, etc. Therefore, even though irradiation will relieve pressure symptoms it is still hard to prove that life will be prolonged.

#### GORDON TEST

Since 1928 a tremendous amount of research work has been done by Gordon (2, 21) of London on various bacteria, filterable viruses, fungi, yeasts, etc., as possible etiological agents of Hodgkin's disease, but so far nothing definite has been shown. During this work it was noticed accidentally that rabbits injected intracerebrally with a broth filtrate of a Hodgkin's disease gland would have a characteristic type of convulsion and palsy, and in many animals death occurred in four to six days. This set of symptoms is characteristic of a positive Gordon test and is supposed to be diagnostic for Hodgkin's disease. Friedemann (1) later found that normal bone marrow, splenic extract and normal leukocytes would each give the same positive reaction. Because of the limited amount of experimental work done and the scarcity of clinical reports, it is not possible to evaluate this test at present. It is the custom in this Clinic to do a Gordon test on every lymphoblastoma, but so far this work has not been found of value in diagnosis. In the near future the authors hope to have enough results of this test alone to be able to report its value in this Bulletin.

#### SUMMARY

This paper has been limited to a discussion of the symptoms, pathology, blood counts, value and limitations of irradiation therapy, prognosis and a new specific test of Hodgkin's disease. The etiology is still unknown, even though valuable work on various bacteria has been done in recent years by L'Esperance and Gordon. The general trend of opinion has been to consider it a chronic granuloma and not a tumor. Recent literature especially is filled with discussions of whether or not irradiation therapy prolongs life. The question is still

not settled. The pathology is very difficult and it is believed that this accounts for the changes in diagnosis and the "cured" cases reported in the literature.

#### CONCLUSIONS

1. Secondary anemia, leukopenia and fever, either a low grade continuous or frequent paroxysms of the Pel-Epstein type, are fairly sure signs of an early downhill course.

2. Patients with Hodgkin's disease are more sick as a rule than patients with any other lymphoblastoma.

3. Splenomegaly as a clinical symptom, skin manifestations, bone involvement and pressure symptoms have not been present in this series as often as reported in textbooks and other literature.

4. A limited experience with the Gordon test has shown it to be of no value in diagnosis.

5. Irradiation therapy has improved symptoms, but we have no proof that it has prolonged life.

The roentgen therapy of these cases was done by H. J. Walton and associates. The pathological studies were by Hugh R. Spencer and associates. Gordon test experiments were performed by E. Eugene Covington and S. Lloyd Johnson, chief of the laboratory. We are deeply grateful to these men for their help. We have discussed only our own views of therapy and pathology.

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## ACUTE CHORIOLYMPHOCYTIC MENINGITIS\*†

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During the past decade numerous reports concerning a supposedly new type of meningitis have appeared in the medical literature. For this disease the designating term acute choriolympocytic meningitis has been accepted by most authorities, but because of the uncertainty that has existed as to the exact nature of the condition, it is not surprising that many other descriptive terms have been employed.

In this paper an attempt has been made to summarize the available knowledge concerning the disease and to present briefly eight cases which seemed to fit into this category.

Although Laubry and Foy (1) in 1910 reported an epidemic of lymphocytic meningitis in France, it was Walgren (2) in 1925 who first described the disease as a specific syndrome. From his study of three cases he has set up the following criteria for a diagnosis of the condition: (a) Acute onset of meningeal symptoms. (b) Meningitic alteration of the spinal fluid. (c) Sterility of the cerebrospinal fluid. (d) Relatively short evolution with favorable prognosis and absence of secondary complications. (e) Absence of demonstrable foci of infection, such as local parameningeal conditions (otitis, sinusitis, etc.) or general illnesses, such as acute infectious diseases. (f) The absence of any acute epidemiological disease that might have the symptoms of meningitis.

Walgren also called attention to the epidemic in France from 1910 to 1913 and in Scandinavia from 1922 to 1924. Case reports began to appear in the literature in 1929 and in that year the first cases reported in this country were described by Viets and Watts (3).

### ETIOLOGY

The relationship existing between acute choriolympocytic meningitis, poliomyelitis and encephalitis has been frequently discussed in the literature. Gunther (4) tabulated 100 cases of lymphocytic meningitis then present in the literature. He found that 50 per cent of the cases occurred between July and October and felt that some

\*Read before the House Staff, University Hospital, January 21, 1937. From the Department of Medicine, University Hospital.

†Acute benign idiopathic meningitis; acute aseptic meningitis; acute lymphocytic meningitis; acute benign lymphocytic meningitis; benign choriolympocytic meningitis, etc.

may have been abortive poliomyelitis. Knauer (5) in 1932 concluded that the encephalitis virus was not the etiological factor because inoculation of the cerebrospinal fluid into the cornea of rabbits did not produce a lesion, while that of epidemic encephalitis caused a dendritic keratitis. He considered the use of convalescent serum dangerous in sporadic cases of encephalitis because of the possibility of introducing virulent viruses into a person with a benign disease. Cruickshank (6) considered this syndrome to be closely related to that of abortive poliomyelitis. Roch, Martin and Monedjikova (7), in reviewing the literature, maintained that greater support existed for an encephalitic than for a poliomyelitic agent, even though one case developed paralysis of the lower extremities. Andersen and Wulff (8) reported thirty-five cases; of these, two developed mental symptoms. They considered that they were dealing with the virus responsible for encephalitis but which in this instance predominantly affected the meninges. Eckstein (9) and Schneider (10) considered the disease as an abortive form of encephalitis and noted an epidemic in Düsseldorf.

Armstrong and Lillie (11) while studying infective material obtained from a patient who died during the epidemic of encephalitis in St. Louis in 1933, through passage into monkeys encountered an unidentified virus on the seventh transfer in one series which produced acute choriolympocytic meningitis in monkeys. They felt this virus was in a latent state and that it was activated by successive transfer. It had a shorter incubation period in monkeys than the virus of encephalitis and with increased virulence displaced the encephalitis virus.

This virus was entirely different from that described by Webster and Fite (12) in the St. Louis and Kansas City encephalitis epidemics of 1933, and by Muckenfuss, Armstrong, and McCordock (13), who worked with material from the St. Louis encephalitis epidemic of the same year. Armstrong and Wooley (14) inoculated rabbits, guinea pigs, monkeys and mice intracerebrally with material from the anterior part of a brain, which gave a pure culture of staphylococci. The majority of the animals died of purulent meningitis, but one monkey died on the eleventh day of a lymphocytic choriomeningitis. This was transmitted to other monkeys and mice. These same authors recovered a similar strain of virus from a monkey that was inoculated with the virus of poliomyelitis. They felt this was an indication that the virus existed among the laboratory animals and made questionable the human source of previous strains. They reported three human cases which showed immune bodies in their blood serum. Dickens

and Armstrong (15) reported four cases with protective agents in their blood serum.

Traub (16), while working with equine encephalomyelitis and hog cholera, obtained an infective agent from white mice which was pathologically and serologically distinct from both. The host of this virus they felt to be the mouse. Rivers and Scott (17) inoculated mice with the cerebrospinal fluid of two cases with symptoms simulating those described for acute choriolympocytic meningitis and successful transfers were obtained. Cross immunological experiments have shown a close relationship between the virus strains of Armstrong, Traub and Rivers. Traub (18) described a mild epidemic in his mice colony in 1935 and was successful in establishing its relationship to acute choriolympocytic meningitis by cross immunity studies.

Findlay, Alcock and Stern (19) reported two cases from which they were able to transmit the disease to monkeys. Cross immunity with Armstrong's virus showed a close relationship between the two.

Traub (20) showed that the virus may persist for a long period of time in recovered mice and could be demonstrated in the blood, urine and nasal secretion. He felt that the immunity was closely linked with tissue immunity and that the virus, antiviral reaction and the leucocytes played no essential part. Armstrong, Wooley and Onstett (21) found that infected monkeys retained the virus in all organs and tissues which were tested. Bengston and Wooley (22) have been successful in cultivating the virus in chick embryos.

#### PATHOLOGY IN LABORATORY ANIMALS

Space does not permit a detailed discussion of the pathology which occurs in experimental animals, consequently this phase will be reviewed briefly. It is generally agreed that mice show a marked meningeal cellular infiltration consisting mainly of lymphocytes and there is a similar involvement of the choroid plexus. Traub described necrosis of nerve cells in the cortex, cerebellum, brain stem and the anterior horn cells of the spinal cord, but other authors make little mention of nerve cell injury. In mice pulmonary involvement is not marked.

In guinea pigs the opposite is true. These animals show bronchopneumonia with a minimal meningeal infiltration.

As a rule the illness is not fatal to monkeys. They react with a lymphocytic infiltration of the choroid plexus. Rabbits are always refractile to the virus. Traub was successful in producing the disease in rats and noted a marked meningitis and inflammation of the choroid plexus.

Forty-five cases appearing in the English and American literature since 1929 are the basis for discussion in this paper of the symptoms, signs and laboratory findings. These cases were reported by Viets and Watts (3), Gager (23), Gordon and Abrahams (24), Gibbens (25), Rankin (26), Bloedorn (27), Dickens (28), Gower (29), Dickens and Armstrong (15), Rivers and Scott (17), Findlay, Alcock and Stern (19), Viets and Watts (30), Abramson (31), Collis (32) and Ginsburg (33).

## CHART I

TABLE REPRESENTATION DENOTING THE FREQUENCY AND IMPORTANCE OF CERTAIN SIGNS AND SYMPTOMS AS SEEN IN 45 CASES OF ACUTE CHORIOLYMPHOCYTIC MENINGITIS AS REPORTED IN THE LITERATURE  
28 males. 17 females

Total Cases	*****	45
Fever	*****	45
Headache	*****	41
Cervical Rigidity	*****	29
Vomiting	*****	27
Kernig	*****	26
Nausea	*****	14
Pain	*****	12
Blurring of Disc	*****	11
Drowsiness	*****	10
Coryza	*****	9
Urinary Retention	*****	7
Photophobia	*****	7
Unconsciousness	*****	6
Anisocoria	****	5
Sore Throat	****	4
Muscle Weakness	***	3
Convulsions	***	3
Babinski	**	2
Irrational	**	2
Sensory Defects	**	2
Diplopia	**	2
Herpes	**	2

Acute choriolympocytic meningitis occurred more frequently in men than in women (28 to 17) and usually between the ages of 10 and 40 years. The youngest case reported was three years and the oldest 46 years of age. The illness may begin suddenly with headache, nausea, vomiting, fever, cervical rigidity and positive Kernig's sign. It may also have an insidious onset over a period of a few days to a few weeks, with fever, malaise, weakness and aching, which may either be general or affect only a single part.

Fever and headache were the most common symptoms, with vomit-



ing, cervical rigidity and positive Kernig's sign present in two-thirds of the cases. In less than one-third of the total cases certain ocular disturbances were noted. These altered manifestations may here be listed in their order of frequency as blurring of the optic disc, photophobia, irregularity of the pupils, weakness of the eye muscles and diplopia. Several symptoms indicative of cerebral origin, including drowsiness, unconsciousness, convulsions, irrational states, Babinski and sensory defects also occurred in a minority of the cases. Coryza was associated with the picture in about 20 per cent of the total cases; urinary retention, sore throat and herpes were also present but less frequently. Twelve patients in the series complained of definite pain in various parts of the body.

The spinal fluid was usually clear but may be turbid. There was a pleocytosis of the spinal fluid cells with lymphocytes dominating the picture. Polymorphonuclear cells dominated the picture in several cases early in the disease, but ultimately the lymphocytes predominated.

The spinal fluid pressure was somewhat increased in the majority of the cases.

The spinal fluid chlorides and sugar were usually normal, but the latter may be found to be elevated. The protein, determined either qualitatively or quantitatively, was usually definitely above normal, but even this did not always hold true. All spinal fluid Wassermanns and cultures were negative.

The blood leucocyte count was generally normal but may be quite high, as evinced in one of the cases. The blood differential count was usually normal.

During the six months prior to the time of writing this paper, the authors had the opportunity of seeing as patients in the University Hospital two cases with clinical histories, physical findings and laboratory analysis results which led the attending physicians to believe they were both characteristic enough to be classed as the entity under discussion, acute choriolymphocytic meningitis. With this as a stimulus the records of the University Hospital from 1923 to the present time were studied and 251 cases were found which for one reason or another belonged to this group. Of these 251 cases it was noted that all but eight could be immediately excluded. It is interesting to note at this point that from 1923 to 1931 inclusive no justifiable cases were detected which could be included in this paper. It was not until 1932 that the first case in this series was found. Therefore, as will be readily seen in the case reports, all of the patients mentioned in this discussion were ill between 1932 and the present time.

These eight cases are presented to show the similarity on the basis of history, physical examination, laboratory findings, course and favorable outcome. Conclusive evidence that these patients did have acute choriolymphocytic meningitis cannot be offered because, as far as is known at the present time, definite proof can only be established on the basis of a specific immunological reaction as carried out on experimental animals, which at this late date is impractical with regard to the cases presented here. The partial motive of this paper is that in patients who so closely mimic this disease, it is of utmost importance that inoculation of animals be carried out, so that on a basis of immunity the specific type of virus to be dealt with may be ascertained.

#### CASE REPORTS

*Case No. 3138.* D. C., a white female, age 9, admitted on September 11, 1936, discharged September 24, 1936. This patient had an acute onset about 35 hours prior to admission to the hospital, which was characterized by severe frontal headache, nausea, vomiting, and drowsiness, with a temperature of 101°F. When the patient turned her eyes to the left she had pain in the right frontal region. The left ear canal was slightly inflamed and the throat slightly injected. There was moderate cervical rigidity, especially when in a sitting position.

September 11, 1936: Spinal fluid, 140 mm. water pressure, clear, Pandy 2+; 280 cells/cm., lymphocytes 85%; polys 15%. White blood cells 9,000, polys 79%; lymphocytes 20%; eosinophils 1%.

September 16, 1936: Clear fluid, Pandy faint trace; 80 cells/cm.; lymphocytes 100%.

September 23, 1936: Clear fluid, 140 mm. water pressure, Pandy faint trace; 2 cells/cm.; sugar 63; chlorides 380; Wassermann negative; culture negative. Tuberculin 1:100 negative.

After spinal puncture the patient's temperature fell from 101°F. to 100°F., where it remained for a few days and then dropped to normal.

*Diagnosis:* Acute choriolymphocytic meningitis (Abortive anterior poliomyelitis?).

*Follow-up:* The patient could not be located.

*Case No. 2344.* Dr. V.McG., a white male, age 40, admitted on August 9, 1936, discharged August 29, 1936. On August 3, 1936 this patient returned from Long Island, New York, where he had been vacationing for ten days. On Thursday, August 6, 1936 he had the onset of his illness with headache, then vomiting, malaise, pain along the upper thoracic spines and some stiffness of the neck. The next day, Friday, he still had fever and felt very ill. On Saturday he had no fever, felt better and was up and around. On Sunday his temperature again went up to 104°F. and he came to the hospital. On admission the only findings were drowsiness and a reddened pharynx. There were negative Kernig's and Babinski signs. The next day he was still drowsy and complained of diplopia. His headache was relieved and there was no vomiting. The patient still showed no cervical rigidity or Kernig's sign. Just before leaving the patient had some slight abdominal pain over the region of the appendix.

August 9, 1936: White blood count 14,750; polys 88%; lymphocytes 11%; eosinophils 1%; blood agglutinations all negative.

August 15, 1936: White blood count 9,000; polys 72%; lymphocytes 26%; eosinophils 2%; blood cultures negative. Spinal fluid clear; increased pressure, Pandy 1+; 200 cells/cm.; lymphocytes 100%. No pellicle nor bacteria. Wassermann negative.

August 24, 1936: White blood count 6,800; polys 62%; lymphocytes 32%; eosinophils 6%. Wassermann negative. Spinal fluid clear; no increased pressure, Pandy faint trace. 19 cells/cm.; sugar 60 mgm.‰.

After admission the patient's temperature dropped immediately from 104°F. to 98°F. and, with the exception of a few upshoots, remained down during the remainder of his stay in the hospital.

*Diagnosis:* Acute encephalitis.

*Follow-up:* The patient's health was good but he tired more easily on exertion.

Case No. 599. J. F. S., Harmons, Md., a colored male, age 24, admitted on May 25, 1935, discharged June 28, 1935. This patient had an acute onset of headache, stiffness of the neck and nausea, but no vomiting or constipation. These symptoms started about one week prior to admission and became worse. A spinal puncture was performed in the accident room and gave the patient some relief by the time he reached the ward. The past and family histories were essentially negative. Examination revealed a markedly injected conjunctiva. The globes were tender to pressure and the pharynx injected. There was no cervical rigidity, but there had been some before admission. Weakness and pathological reflexes were absent. Kernig's sign was not recorded on the chart. Blood pressure was 130/80.

May 25, 1935: The radiographs of the skull and chest were negative. The urine showed occasional white blood cells. Phenolsulphonphthalein 90%; non-protein nitrogen 29 mgm.‰; blood sugar 83 mgm.‰; Wassermann negative.

May 25, 1935: Spinal fluid clear; 83 cells/cm; lymphocytes 95%; Pandy 1+.

May 28, 1935: Spinal fluid clear; 27 cells/cm; lymphocytes 100%; Pandy trace; sugar 66; Wassermann, culture, smear negative; pressure 150 mm. water.

June 8, 1935: Spinal fluid clear; 7 cells/cm; lymphocytes 100%; Pandy negative; culture and smear negative; pressure 128 mm. water.

June 18, 1935: Spinal fluid clear; lymphocytes 100%; 6 cells/cm; Pandy trace; pressure 108 mm. water. On one occasion the total protein was 51.9 mgm.‰.

The temperature dropped from 101°F. to 98.6°F. in the first 24 hours and did not rise above 99.6°F. Pulse was between 60-100; respirations 20-30.

*Diagnosis:* Lympho-meningo-encephalitis.

*Follow-up:* A report received January 16, 1936 from the doctor who sent the case into the hospital stated that the patient is in excellent health and good condition.

Case No. 79382. L. H., Emmitsburg, Md., a white male, age 21, admitted on July 30, 1932, discharged August 11, 1932. This patient was a brother of Case No. 79376 and had another brother at home with a very similar condition. The patient was admitted to the hospital because of dizziness, fever and sweats of five days' duration. He had just come back from a vacation in the country where he had stayed on a farm. A number of the people of that location had attacks of diarrhea that were thought to be caused by the water. The patient had access to this same water. The past history was essentially negative. Patient was a well nourished and developed young male. There were 30 to 40 small petechial spots over the back. The conjunctiva were very injected. The nose was turgescient. Some of the cervical nodes were palpable. The tongue was coated. A few crackles

were heard in the right chest posteriorly. The pulse was 88 and the blood pressure 132/72. Knee jerks were absent but ankle jerks were present. Cremasteric present. Babinski was negative. The abdominals were active. Legs were weak in general but not confined to any muscle or muscle group. The bilateral grip was good. Face and tongue were symmetrical. There was no cervical rigidity.

July 30, 1932: Blood Picture: Red blood cells 5,200,000; white blood cells 8,200; hemoglobin 75%; polys 49%; lymphocytes 50%; eosinophils 1%.

July 31, 1932: Poliomyelitis convalescent serum 20 cc. by vein and intraspinal. Spinal fluid clear; 11 cells/cm.; sugar 62; globulin negative; all lymphocytes. Culture and smear negative.

August 1, 1932: Moves all four extremities; knee jerks and ankle jerks active. General hyperaesthesia. Right pupil larger than left. Increased cervical rigidity. Kernig's sign caused sciatic pain. Mentally clear. White blood cells 9,800.

August 2, 1932: Babinski positive on the left. Legs weak, more so on the left. Mentally clear. Kernig's sign positive. Neck rigid.

August 4, 1932: Neck still rigid. Negative Kernig. Good strength in all extremities. Urine, stool, Widal, blood culture, stool and urine cultures, Wassermann all negative.

Temperature on admission was 103°F., dropped to 100°F. on the second day, rose to 103°F. the third day and then rapidly became normal.

*Diagnosis:* Anterior poliomyelitis.

*Follow-up:* From a close relative of the patient it was learned that both he and his brother, who was a patient at the same time and who it was believed had the same disease, made speedy and uncomplicated recoveries and returned to work in excellent health.

*Case No. 79376.* H. H., Emmitsburg, Md., a white male, age 13, admitted July 29, 1932, discharged August 11, 1932. This patient became ill four days prior to admission to the hospital. The first three days he had severe pain over the occiput, with vomiting and constipation. He went right to bed but there was little change, except that he was a little feverish. During the night before admission his temperature rose to 104°F., he became very drowsy, would not answer questions, and began to have slight twitchings over the entire body. Family history was negative, except for another brother who was sick at the same time. Past history indicated that he had been in bed for 20 weeks in 1929 because of rheumatic fever with heart involvement.

The patient was a well developed and nourished young white boy. He was dull and stuporous and the head was slightly retracted. Eyes, ears, nose and throat were negative. Lungs were clear. Heart had a murmur at the mi. Pulse was 58, blood pressure 120/78. Abdomen negative. Patient lay very relaxed, but occasionally a quick clonic jerk appeared in a single muscle or a group of muscles on either one or the other side. Knee jerks were not obtained, ankle jerks hyperactive. No Babinski. Cremasteric active. Biceps absent. Triceps present. Strength in two hands about equal. Fell asleep easily. Obeyed simple commands. Neck slightly rigid. No choking of the disc. Kernig's sign negative.

July 29, 1932: Blood picture: Red blood cells 3,900,000; white blood cells 9,400; hemoglobin 80%; increased pressure in the spinal fluid; globulin 1+; 184 cells/cm.; polys 62% and lymphocytes 38%.

July 30, 1932: White blood cells 12,400.

July 31, 1932: Left drum slightly injected. Nodes at angle of jaw enlarged and there was general glandular enlargement. Right knee jerk obtained. Neck

rigid. The differential had changed so that there were only polys 5% and lymphocytes 95%.

Temperature was 104°F., dropped to 100°F. in a couple of days, then back to 104°F. and at the end of a few more days dropped rapidly to and remained normal.

August 1, 1932: White blood cells 16,400. Positive Kernig on both sides. Very little twitching.

August 3, 1932: Poliomyelitis convalescent serum 20 cc. by vein and intraspinal.

August 4, 1932: Patient conscious. Both knee jerks produced a slight twitch. Good grip in each hand and able to move from side to side. Neck and back still rigid.

August 8, 1932: Patient made excellent improvement. Left pupil was a little larger than the right. Urine and Widal negative.

*Diagnosis:* Anterior poliomyelitis.

*Follow-up:* Same as Case No. 79382.

*Case No. 99878.* W. R., Gettysburg, Pa., a white male, age 42, admitted on April 19, 1936, discharged May 20, 1936. On admission the patient stated that he had pain in the right side of his head for the past six weeks but that he had vomited for the first time the day before.

*Note by Dr. Irving J. Spear:* "Four weeks ago the patient was perfectly well and then one morning got up with a headache that was more or less general. There was no running from his nose. He took aspirin and skipped a few days without headache. During the first week the pain was more or less diffuse. During the second week he had a headache every morning and it lasted longer each time. Last Wednesday night he had a spinal puncture which he believed hurt him somewhat. During the first week he was sent to a hospital for a basal metabolism rate and one week ago his head was radiographed. The right pupil was slightly larger than the left. Outline of the temporal portion of the disc on the right was not quite as clear as the left. Tongue slightly to the left. No cervical rigidity. Slight drooping of the angle of the mouth on the right. Temperature 100.6°F."

Seen on April 8th by Dr. Spear, who advised drainage of the right frontal and ethmoidal sinuses. This was done on April 14th. He became disoriented and confused, and the headache continued.

*Note by Dr. Anderson:* Both nerve discs are indistinct. Visual fields contracted. Encephalogram normal. Wassermann negative. Spinal fluid Wassermann (Kolmer) negative.

April 19, 1936: Blood count: Red blood cells 5,250,000; white blood cells 9,200; hemoglobin 95%; polys 73%; lymphocytes 25%; eosinophils 2%.

April 20, 1936: Pressure 320. 246 cells/cm.; lymphocytes 100%; Pandy 4+; mastic 4-5-4-3-2-1-0-0-0; slight yellow fluid; Wassermann negative; definite pellicle formation after standing only few hours.

April 22, 1936: Yellow tinged; globulin 4+; 243 cells/cm.; lymphocytes 100%.

April 25, 1936: Red blood cells 5,050,000; white blood cells 14,950; hemoglobin 102%; polys 77%; lymphocytes 16%; eosinophils 6%.

April 27, 1936: Slight yellow tinge; Pandy 4+; 479 cells/cm.; lymphocytes 100%; no pellicle; guinea pig negative; mastic 4-4-4-3-2-1-0-0-0.

May 5, 1936: Yellow fluid 35 cc.; pressure 320 mm. water; fibrin web formed; globulin 4+; 310 cells/cm.; lymphocytes 100%; sugar 53 mgm.%.

*Pathology:* Guinea pig negative, suggestive but not pathognomonic of lymphocytic choriomeningitis.

May 7, 1936: Globulin 4+; 475 cells/cm.; lymphocytes 100%.  
 May 10, 1936: Yellow fluid; 270 cells/cm.; lymphocytes 100%.  
 May 12, 1936: Globulin 4+; 207 cells/cm.; lymphocytes 100%; sugar 48.  
 May 15, 1936: Globulin 4+; 82 cells/cm.; lymphocytes 100%.  
 May 20, 1936: Globulin 4+; 165 cells/cm.; lymphocytes 100%; sugar 46.  
*Diagnosis:* Lymphocytic choriomeningitis.  
*Follow-up:* Patient in excellent condition.

*Case No. 95701.* H. K., a white male, age 14 years, admitted on September 7, 1935, transferred to Sydenham Hospital September 9, 1935. The patient was

## CHART II

TABLE REPRESENTATION DENOTING THE FREQUENCY AND IMPORTANCE OF CERTAIN SIGNS AND SYMPTOMS AS SEEN IN EIGHT CASES OF ACUTE CHORIOLYMPHOCYTIC MENINGITIS PRESENTED IN THIS PAPER

Total Cases	*****	8
Fever	*****	8
Headache	*****	7
Cervical Rigidity	*****	6
Vomiting	*****	5
Kernig	*****	3
Nausea	*****	6
Pain	*****	1
Blurring of Discs	*****	1
Drowsiness	*****	3
Coryza		0
Urinary Retention		0
Photophobia	*****	2
Unconsciousness	*****	1
Anisocoria	*****	1
Sore Throat	*****	4
Muscle Weakness	*****	3
Convulsions	*****	1
Babinski		0
Irrational	*****	1
Sensory Defects		0
Diplopia	*****	1
Herpes		0

admitted to the hospital with the complaint of headache, stiff neck and fever, the onset of which was two weeks before. This subsided and recurred two days ago. The stiff neck was the last symptom to appear. The family and past histories were essentially negative. Examination revealed a well developed and nourished white boy who did not look very ill. There was a coating of the tongue and the pharynx was injected. There were some shotty glands at the angle of the jaws and the neck was rigid. Blood pressure 130/65. Pulse 84. Kernig's sign was positive. Other neurological and physical examinations were negative.

September 7, 1935: Urine negative. Blood picture: Red blood cells 4,670,000; white blood cells 9,650; hemoglobin 98%; polys 71%; lymphocytes 25%; eosinophils 4%. Spinal fluid cells 116/cm. Differential: lymphocytes 100%; globulin negative;

sugar 57; Wassermann and culture negative. Spinal fluid cells 118/cm.; lymphocytes 100%; sugar 57; globulin 1+.

September 9, 1935: White blood cells 9,900.

Temperature ranged between 100°F. and 101°F.; pulse 80 to 110.

CHART III

COMPARISON OF THE RESULTS OF THE CASES IN THE LITERATURE AND THE 8 CASES PRESENTED HERE AS TO LABORATORY FINDINGS

	NUMBER OF CASES	LOW	HIGH	AVERAGE
<i>Leucocytes</i>				
In literature. . . . .	27	5,000	37,000	10,200
In University Hospital. . . . .	7	8,000	39,000	14,100
<i>Blood Polys</i>				
In literature. . . . .	22	46	81	67
In University Hospital. . . . .	6	49	88	74
<i>Spinal Cells</i>				
In literature. . . . .	43	40	14,300	1,022
In University Hospital. . . . .	8	11	475	207
<i>Spinal Fluid Lymphocytes</i>				
In literature. . . . .	38	55	100	94
In University Hospital. . . . .	8	95	100	99
<i>Spinal Fluid Protein</i>				
In literature. . . . .	23	37	282	132
In University Hospital. . . . .	1	52	52	52
<i>Spinal Fluid Pressure</i>				
In literature. . . . .	18	20	510	223
In University Hospital. . . . .	4	140	320	208
<i>Spinal Fluid Sugar</i>				
In literature. . . . .	27	39	130	71
In University Hospital. . . . .	7	53	66	59
<i>Spinal Fluid Chlorides</i>				
In literature. . . . .	23	610	784	718
In University Hospital. . . . .	1	380	380	380
<i>Ages</i>				
In literature. . . . .	45	3 years	46 years	24 years
In University Hospital. . . . .	8	7 years	42 years	21 years

*Diagnosis:* Anterior poliomyelitis.

"A follow-up from Sydenham Hospital stated that a diagnosis of nonparalytic poliomyelitis had been made but that the child had been removed from the hospital on September 13, 1935 against advice.

"A further follow-up from the mother of the child, which was obtained just this past week, showed that the child got well in a couple of weeks after leaving Sydenham and had been in excellent health ever since, with no complications whatsoever."

*Case No. 646.* M. L., Baltimore, Md., a colored female, age 7, admitted May 25, 1936, discharged June 7, 1936. The onset of this child's illness took place the day before admission to the hospital, following good health. It was characterized by nausea, vomiting, headache and fever.

There were nine siblings in the family. One died of meningococcus meningitis, three weeks before; another supposedly had the same disease two weeks prior but did not die; a third child had rheumatic fever two weeks before. The patient did not look acutely ill. There was no cervical rigidity.

May 25, 1936: Spinal fluid: 311 cells/cm.; smear showed some lymphocytes present; there was a faint trace of globulin; pressure 130 mm. water.

May 26, 1936: 47 cells/cm. Differential count: lymphocytes 98%; pressure 212 mm. water; negative for tuberculosis.

May 27, 1936: 60 cells/cm.; lymphocytes 90%; globulin negative.

May 30, 1936: Pressure 220; clear; sugar 57; Wassermann negative. Blood picture: White blood cells 39,000; polys 85%; lymphocytes 15%; Eosinophils 1%.

*Diagnosis:* Lymphocytic meningitis.

*Follow-up:* Patient moved several times after leaving the hospital; we were able to trace her through two new addresses before losing her.

By correspondence, telephone and personal visits it has been demonstrated that six of the eight cases had speedy and uncomplicated recoveries and were in excellent health. One of the two remaining cases had moved several times since leaving the hospital. The patient was followed to two new addresses before she was completely lost. However, the present occupants at each house had been acquainted with the family and reported that as far as they knew the child had gotten along perfectly well. The one remaining case could not be located and the outcome was unknown, except that the patient had apparently made a complete recovery before leaving the hospital.

#### DISCUSSION

Acute choriolymphocytic meningitis is well defended as a specific disease entity in which the etiological agent is believed to be a virus which affects the meninges predominantly. Epidemics have been reported in France in 1910, following an epidemic of poliomyelitis, Scandinavia in 1924, following an epidemic of encephalitis, and Düsseldorf in 1931. The majority of the cases are said to occur during late summer and early autumn.

At the present time it is felt that an early clinical diagnosis of this disease is not warranted. The first problem is to eliminate as many diseases as possible which cause spinal fluid lymphocytic pleocytosis, and the second is to establish the identity of the virus by animal experimentation. Two cases that illustrate this latter fact occurred



in the University Hospital. Both had a sterile spinal fluid with lymphocytic pleocytosis. One died of a localized cerebral purulent leptomeningitis and the other died of tuberculous meningitis at Sydenham Hospital, where the patient had been transferred as a case of abortive poliomyelitis.

Tuberculosis, syphilis, herpes zoster, mumps, influenza, etc., all produce a lymphocytic response to the cerebrospinal fluid. These are not usually difficult to diagnose and they should be definitely eliminated. Herpes or mumps may be delayed in appearance for several days, which is very misleading and discouraging from the standpoint of clinical diagnosis.

#### CONCLUSION

1. Acute choriolympocytic meningitis is a new disease entity, thought to be caused by a virus of unknown origin.

2. Abortive poliomyelitis, abortive encephalitis and acute choriolympocytic meningitis cannot be differentiated clinically. However, they can be differentiated by immunological reactions or by establishing the virus strain in an experimental animal.

3. The majority of cases have an acute onset, a rather short course and favorable prognosis.

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THE LIBRARY OF THE SCHOOL OF MEDICINE, UNIVERSITY OF MARYLAND\*

RUTH LEE BRISCOE†

The University of Maryland, founded 1807, was the first medical college in this country to establish a Library, which was constituted in 1813. During the early years of the Library's existence its small collection of books was housed in the Provost's office in the medical college building. As time went on, and various departments were added and mergers with other medical institutions formed, it became necessary to seek more commodious quarters in order to accommodate the increasing accessions of books and journals. The present location, an old church edifice, was purchased for a library in 1905 and called Davidge Hall in honor of Dr. John Beale Davidge, the founder of the University of Maryland.

At the time of the Library's foundation its location marked the outskirts of the City, and from the beautiful portico of the Medical College could be seen the reaches of the brimming river. The social and intellectual life of Baltimore clustered about the University, which is rich in memories of a bygone day. Nearby in Westminster Churchyard stands the tomb of Dr. John Crawford, the purchase of whose books in 1813 formed the nucleus of this Library. Westminster holds also the chief literary shrine of this vicinity, the grave of Edgar Allan Poe.

Dr. Crawford was said by some to be the forerunner of Pasteur in his belief that micro-organisms outside the body cause disease and was the first to introduce vaccination into America. He received from the Dutch Government an appointment as Surgeon-Major to the Colony of Demerara in South America. This explains the fact that a number of his books were printed in the Dutch Language. Many years ago the University enrolled a student in the School of Medicine who had attended the University of South Africa and understood Dutch; he translated the title pages of these books for the Library. Among the books in the Crawford Collection are fine examples of the bookbinding methods of the seventeenth and eighteenth centuries. Some are bound in vellum and parchment, others in calf and deerskin, with designs in blind and gold tooling.

In the Bodleian Library, Oxford University, England, repose the

\* Read before the monthly meeting of the Maryland Dietetic Association, December 13, 1937.

† Librarian of the School of Medicine, University of Maryland.

many thousands of volumes which contain the story of the world's intellectual life. Here and there between the stacks and on the walls are treasures of a different sort—memories of men and women who have lived in the past, things of no literary value but full of human interest, such as portraits, letters, autographs, the exercise books of the young scholars Edward VI and Elizabeth, and the Shelley relics. A similar sentiment prevails in the Library of the School of Medicine. Here are housed 18,000 medical books and journals which contain much that is precious to learning. It is a partial record of the world's scientific achievements in the medical sciences and memorabilia of various kinds associated with the Alumni of the School of Medicine. Among this Alumni collection are autographed presentation copies of their works, theses which were submitted for the degree of Doctor of Medicine from 1817 to 1886. These have been bound in 189 volumes. Many of them were written in Latin. Others were adorned with unique embellishments, such as ribbons, fancy pictures, pen-and-ink sketches, according to the taste of the writer. The Library has ancient admission tickets to lectures that were signed by members of the old faculties. It owns a valuable St. Memin portrait of Dr. Nathaniel Potter, a founder of the University and for thirty-six years Professor of Medicine in the University. The General LaFayette Memorial Flag was presented to the Library in December, 1917 by the Maryland Society of the Daughters of the American Revolution in honor of General LaFayette, upon whom was conferred the first degree of Doctor of Laws of the University of Maryland in 1824. One of the most highly prized possessions is the collection of portraits and biographies, and the Mortality Roll of the University's Gold Star men and women in the World War.

The front gallery of the Library is dedicated to the late Dr. Gordon Wilson, one of the most scholarly members of the Faculty, who was Professor of Medicine from 1914 to 1932. A picture of Dr. Wilson together with a memorial plaque adorn the wall, and his own furniture grouped here stimulates study and contemplation. A portrait in oils of the late Dr. Eugene Fauntleroy Cordell, Professor of the History of Medicine and Librarian of the University, deceased in 1913, is a constant reminder of Maryland's most illustrious historiographer. His *Medical Annals of Maryland* and *History of the University of Maryland* in two volumes are well-known and monumental works. The bronze bust of the Dean, Dr. James M. H. Rowland, executed by his daughter, Mrs. Marjorie Rowland Clarke, is the gift of Mr. and Mrs. Carl D. Clarke. The presentation was made on Rowland Day, December 18, 1936, when the University celebrated

Dr. Rowland's twentieth anniversary as Dean of the School of Medicine and his fortieth anniversary as a member of its Faculty.

No history of the Medical Library would be complete without a reference to its departed friends, Professor Randolph Winslow, Professor John R. Winslow, and Dr. Nathan Winslow, all of whom died in 1937. These men, by their generous gifts and unceasing interest in the Library, proved their abiding love for their Alma Mater. Professor Randolph Winslow was Chairman of the Medical Library Committee for many years, and under his guidance and influence the Librarian became imbued with the history and traditions of the University—a heritage which is hereby gratefully acknowledged.

Under the inspiring leadership of Dr. Carroll Lockard, who has been Chairman of the Library Committee for nearly a decade, the Library has made marked progress in the selection of books and journals and in achieving physical improvements to the building.

Thus the Library has grown from a small beginning in 1813 to a period which will in the coming year bring us to the one hundred and twenty-fifth year of its founding.

In October the remodeling of Davidge Hall was begun with the sanction of President Byrd. As this paper goes to press the dingy, dark vestibule which was poorly lighted and included a telephone booth, has been replaced by a charming foyer with hardwood floors and steps. Balustrades of wrought iron and brass railings, new lights and a neat wall telephone have also been added. The walls of the Library throughout have been painted a soft Nile green, with ceilings of light buff color. The woodwork has been finished in mahogany. In the basement a new floor of concrete has been laid and painted gray, and metal book stacks, an electric book elevator, a small kitchen for the use of the staff and tiled lavatories have been installed. The large ornamental glass memorial window on the first floor of the Library has been removed, and in its place was formed a niche. Here, upon a beautiful walnut pedestal stands the above-mentioned bronze bust of Dr. Rowland. The basement windows and rear entrance are fitted with wrought iron grills which lend dignity to this old colonial structure.

PROGRAM OF ROWLAND DAY CELEBRATION

DECEMBER 18, 1936

*Peabody Hall*

11:00 A.M.

Presiding: Dr. Arthur M. Shipley, Professor of Surgery, School of  
Medicine, University of Maryland

Processional

Invocation: Rev. William H. Litsinger

Address: Dr. Thurman D. Kitchin, President Wake Forest College,  
Wake Forest, N. C. "Dr. Rowland, Man and Doctor"

Presentation of Portrait of Dr. J. M. H. Rowland, Dean of the School  
of Medicine and Professor of Obstetrics, University of Maryland,  
by Dr. Charles Bagley, Jr.

Acceptance of Portrait: Dr. H. C. Byrd, President of the University  
of Maryland

Benediction: Rev. James H. Straughn

Recessional

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2:30 P.M.

Clinics

University Hospital

Gordon Wilson Hall

*The Belvedere Hotel—Dinner*

7:00 P.M.

Toastmaster: Dr. Walter D. Wise, Professor of Surgery, School of  
Medicine, University of Maryland

Speakers:

Dr. Alan M. Chesney, Dean of School of Medicine, Johns Hopkins  
University. "Dr. Rowland, The Dean"

Dr. Maurice C. Pincoffs, Professor of Medicine, School of Medicine,  
University of Maryland. "Dr. Rowland, The Physician"

The Hon. Samuel K. Dennis, Chief Judge of the Supreme Court of  
Baltimore City. "Dr. Rowland, The Citizen"

Dr. Charles Reid Edwards, Professor of Clinical Surgery, School  
of Medicine, University of Maryland. "Dr. Rowland, The Man"

## DR. ROWLAND, MAN AND DOCTOR\*

THURMAN D. KITCHIN, M.D. †

WAKE FOREST, N. C.

The life and the work of the man we honor today suggests my subject—Man and Doctor.

The North American Indians were wont to call their doctors *medicine men*. They were far behind in knowledge, whether of man or medicine; but the designation is in line with modern thought and practice. More and more the emphasis is shifting from prescription to personality, less medicine and more *man*.

Science, especially through communication and transportation, has brought people into such close contact with each other that the world has become an intricate network of human relationships. Even if he would, the physician cannot isolate himself, because he is of necessity in closest touch with all types of people. More than other professional men he is brought into intimate contact with all classes, the rich, the poor, the learned, the unlearned. His profession makes the doctor a liaison between all social strata. He, therefore, bears a peculiar relationship to the public. His responsibility does not end with the technical knowledge of his profession; far more than that is required. He must be a citizen of society at large, in truth, a doctor *plus*.

An eminent physician with broad humanitarian interests has said that the time will come when the culture of a nation will be estimated according to the mutual relationships between medicine and the people; that we must strive to improve man individually and collectively by scientific research into the wants and needs of mankind, and apply preventives and remedies for mankind's physical, intellectual and moral dangers and defects; that through this process medicine can create that power which alone protects individuals against despair and saves nations from wreckage.

But the doctor has a dual obligation. While he is a citizen of the world and must serve the human family as a whole, yet his immediate and imperative responsibility is to the individual, his patient.

Variation among individuals, that human quality which so sharply marks them off from the machine-made product and which demands

\* Address at the presentation of the portrait of Dr. J. M. H. Rowland, December 18, 1936.

† President of Wake Forest College.



J. M. H. ROWLAND, M.D., Sc.D., LL.D.

*Dean of the School of Medicine, University of Maryland*

*(From a portrait in oils by Thomas C. Corner)*



of the doctor intellectual exercise and individual judgment and adjustment in each and every case, eludes and in some cases baffles. This variation, I say, is what makes our profession so interesting and absorbing. The very fact that we go to school to our patients as long as we continue to practice, and that with every new patient there are new things to learn, is a challenge to the best there is in man.

In this connection I am thinking especially of the old personal relationships of the doctor with the patient. These may be half hidden by that which is ephemeral in the new order and may appear now and again under a new guise; nevertheless, they remain.

The physician must never forget the patient who is harboring the disease. Of course, it is presupposed that doctors should know all there is to be known about the scientific side of medicine, the latest in diagnosis and in treatment; but even this is not enough since the reason for any of it to be done at all was, is, and will always be, the patient. To focus so much attention on the patient is not a contraction of horizon because every individual is a unit in society and the saving of this unit contributes to the ultimate saving of society as a whole. Undoubtedly we have in our scientific studies strengthened the tangible thing in diagnosis and treatment. We must guard against the danger that the intangible, that is, the human element, may be lost.

We have been so busy applying the findings of the microscope and the test tube that perhaps we have not had sufficient time left for the patient. I am not for a moment disparaging the miracles science has wrought, yet I am frank to say that these are not enough; there must be an emanation from the heart, from the spirit, to help the patient keep up his courage and fight his way through. With all of our modern success and manifold accomplishments we can well turn back and take a few leaves from the doctors of years gone by, who waged a good fight before the birth of our modern medicine; and from them the paramount lesson to be learned is that the patient is not merely another case but an individual and as such must be given personal and sympathetic study, and the whole realm of our understanding.

Amiel, writing in his *Journal* in August, 1873, gave expression to a text from which we might well preach today. "Doctors make mistakes" he says, "because they are not sufficiently individual in their diagnosis or their treatment. They class a sick man under some given department of their nosology, whereas every individual is really a special case, a unique example. . . . Every illness is a factor simple

or complex, which is multiplied by a second factor, invariably complex—the individual . . . who is suffering from it, so that the result is a special problem, demanding a special solution . . . a doctor who does not read you to the bottom is ignorant of essentials. To me the ideal doctor would be a man endowed with profound knowledge of life and the soul . . . and restoring peace by his mere presence.”

Of course, the physician must rely upon the research man for technical information concerning his problem. Research is essential and a conscientious research worker will always be the vitamin of scientific progress, but it is the duty of the practitioner to mediate between a man absorbed in the purely scientific matters of laboratory and library and a public absorbed in the practical atmosphere of everyday affairs. A doctor must be prepared to interpret the important and useful findings of the exponent of the world of science in terms which may be understood by society at large and therefore of service. And surely the alert and discerning physician who applies these discoveries to the benefit of mankind deserves to share with the researcher some of the credit and glory which is the just due to both.

Furthermore, it is necessary for the physician to have a knowledge of social pathology as well as medical pathology. He must have a knowledge of the way in which mankind has behaved in the past and is behaving at the present. Broadly speaking, the problems of medicine are as likely to require sound judgment based upon a knowledge of history, sociology, philosophy and psychology as on the facts of science.

Therefore, all of his life a doctor must remain an undergraduate student. Like Goethe, he *dies learning*, for man is *fearfully and wonderfully made*. It is a long way from the Psalmist to Carrel and our textbook is still *Man, the Unknown*. Our course of study expands with the passing years. The microscope no less than the telescope lures us into the unknown. We deal not merely with a sick body, we minister to diseased minds and to the social conditions that produce them. Our training leads into broad fields. Every department of man's triune nature may have an open gate for a Trojan horse full of menacing foes.

To Solomon the Wise is credited the saying that “it is the glory of God to conceal a thing; but it is the honor of Kings to search out a matter.” This holds the secret of reverent research and is the key to acquired knowledge. Moreover, it accounts for the development of brain. Man was flung naked and empty-handed into a world of hidden things, good and bad, and the search began. That man of laughter and good feeling, Mark Twain, avers that the thrill of dis-

covery is the greatest thrill in life. If both Solomon and Mark are right about it, then the doctor is due in this world or the next some of the honor of kings and the thrill of angels.

Not one iota of the findings of laboratories of physics, chemistry, biology and psychology and their clinical application must be gain-said, and naturally it is assumed that the doctor has availed himself of these and has at his command all the technical information of his profession.

But let us not beguile ourselves with the thought that magnificent buildings and elaborate equipment will serve the needs of humanity without the corresponding man power, any more than the finest automobile will go without a proportionate engine. Man will always be greater than his tools. To expect little men in big buildings to produce big results will be as disappointing as when a mountain labors and brings forth a mouse. On the other hand, an unpretentious plant and modest equipment may, and often does, when manned by great men, produce wonders.

During the relatively short period the man we honor today has been teaching medical students, a myriad of changes have been wrought in the domain of medicine. He has seen bacteriology placed on a sound basis with its antitoxins, agglutinins and vaccines; the application of radioactivity to the diagnosis and alleviation of human ills; tremendous advances in the knowledge of the deficiency diseases; rapid strides in the field of endocrinology; both accomplishment and hope in biochemistry; real progress in treatment, that is, rationalism and science replacing empiricism. In this period he has seen the development of legitimate specialism; emphasis on graduate teaching; research and, especially, *endowed* research on an unprecedented scale; preventive medicine and maintenance of public health taking their rightful places among the most important functions of the Government, reminding one of perhaps the greatest statement of Disraeli:

“Public health is the foundation on which reposes the happiness of a people and the power of a country. The care of the public health is the first duty of a statesman.”

Finally, he has witnessed the development of psychotherapy. It is probable that physicians have always used psychotherapy but it is within this period that it has developed from what was in olden times an admixture of intuition, sympathetic knowledge of human nature and common sense, to a logical, reasonable foundation, along with other rational branches of medicine.

The conception of the doctor I have tried to give is as old as medicine itself. Did not medicine have its beginning in the native desire

of man to help his brothers in distress? Those of the tribe who were most highly developed in their longing to help their fellows were set apart as doctors. The discoveries and inventions of time have only enlarged their power and sphere of helpfulness. The pages of history sparkle with the names of physicians who have made this world a better place in which to live; men who have had the inherent qualities of greatness and the added skill of the doctor. Would that I had time to read the roll of honor!

And then that long list of martyrs who have laid down their lives that their fellow men might be healthier and happier and have dominion over all the globe. These men have brought down through the centuries the spirit of the Great Physician who said: "Greater love hath no man than this, that a man lay down his life for his friends."

In conclusion, may I sum up:

Every patient is a new disease. Every man is unique. Possibly 48,000 genes interacting variously, ten or more activating and controlling hormones, and the internal and external conditioning environment combine to produce a structure of unimaginable complexity and unpredictable reactions. Its abnormalities and dislocations, its malfunctioning and injuries, are all but infinite. In the case of the artist who handles this mass of mystery and fate, no elaboration of training, no laboratories, however beautiful and up-to-date, no instruments of precision, no clinics, no autopsies, can take the place of the inborn gifts of intuition, penetration and unerring judgment. The great doctor is a genius.

In the midst of the mystery and sin, the pain and sorrow of the world, the doctor is a sort of priest, instinctively and utterly trusted, who shares in an intimate and sacred confessional the burden of broken hearts. And a broken heart is a more serious malady than a broken arm. Besides, the spirit life of man is as much a fact of nature as nutrition and requires spiritual apprehension and sympathy for its treatment. The great doctor is a saint.

When doctor meets patient and they understand, that is a sublime moment in human relationships.

## DR. ROWLAND, THE DEAN\*

ALAN M. CHESNEY, M.D.†

BALTIMORE, MD.

I wish to thank the members of the committee in charge of this celebration for the honor extended to me in inviting me to speak at this testimonial dinner to Dr. Rowland. Of course, I recognize that the principal reason for the invitation was the fact that I happen to be an administrative officer in a sister medical school, but I also like to think that perhaps there may have been another reason for the choice, that the committee may not have been unmindful of the warm friendship which exists between Dr. Rowland and myself when they determined to invite me. At any rate, whatever may have been the mainspring for the committee's action, I want them to know how much I appreciate their kind invitation and how glad I am to be here.

I have been asked to speak about Dr. Rowland as a Dean. I take it that means I am to discuss his contribution to medical education, not as a teacher, but as the administrative officer upon whose shoulders has fallen the principal part of the burden of guiding the destinies of the school with which he has been identified. It is in that sense that I should like to speak of him.

It may interest some of you to know that Dr. Rowland very early in his career gave evidence of a distinct bent for administrative work. I refer to his success in assembling a very able football team for the old Baltimore Medical College in the gay nineties. Dr. Rowland, you will recall, graduated from that college in 1892 and at once became one of the junior instructors. A few years later the authorities of the college came to the conclusion that it was imperative for the welfare of the institution that it have a winning football team and word to that effect went out from headquarters. To Dr. Rowland, one of the youngest members of the Faculty at the time, was assigned the task of getting a team together and he carried out the assignment with great success. I know whereof I speak because as a boy I followed the fortunes of that team and on one occasion saw it almost defeat Princeton here in Baltimore at the old Union League baseball grounds. I mention this achievement of Dr. Rowland's because it shows that very early in his career he demonstrated that he had organizing ability and could carry out successfully what was in reality a somewhat difficult administrative assignment.

\* Address at the Rowland Day Dinner, December 18, 1936.

† Dean of The School of Medicine, Johns Hopkins University.

In 1913 the Baltimore Medical College was merged with the University of Maryland and Dr. Rowland came down to Lombard and Greene Streets along with the other assets of the college. It did not take his new colleagues long to recognize that he had a gift for administrative work for only three years later, that is, one year after the College of Physicians and Surgeons was taken into the fold, they made him Dean and he has occupied that position ever since. It is during this twenty-year period, of course, that he has made his real contribution to medical education. What is that contribution?

To an outsider it appears as a constant, steady and successful effort to improve the condition of the School whose interests it was his duty to advance. We can best appraise the success which has attended that effort if we compare the School of Medicine of the University of Maryland as it was in 1916 with what it is today. We may with justice make that comparison on the basis of four things: first, the value of the physical property of the School; second, its annual income; third, the character of the instruction afforded the students; and, fourth, the attainments of the faculty.

When Dr. Rowland became Dean in 1916 the School's plant together with equipment was valued at a little under \$1,000,000, and I imagine some of you would consider that an optimistic figure. Today it is valued at \$3,435,000 in round numbers, a three-and-a-half-fold increase. The annual income in 1916 was in the neighborhood of \$45,000; in 1934, the latest year for which published figures are available, it was \$225,000 in round figures, a five-fold increase. Let me point out to you that this very considerable increase in income has been due to increases in the tuition fees collected from students and does not represent any large appropriations from the State of Maryland. So much for the financial side of the picture. What about the instruction and the men who are responsible for giving it?

As for the instruction afforded the students of the School of Medicine of the University of Maryland I would say, on the basis of my own observation, that that instruction is decidedly better today than it was a generation ago. I am persuaded that the Maryland graduate nowadays is a better trained doctor than was his predecessor of twenty years past. I do not say that he is a better man, but I do say that he is better trained. Fortunately, you do not need to take my opinion alone on this particular point. You can yourselves examine the record of University of Maryland graduates in the state board examinations. If you do you will find that in 1916, 104 graduates of the University of Maryland took state board examinations in various parts of the country to obtain licenses to practice medicine. Of these 104, 21 or

16.8 per cent failed. In 1935, 111 took the examinations and 4 or 3.6 per cent failed. In 1934, 104 took the examination and none failed. These figures are significant in my opinion.

Finally, there is the Faculty. Is the 1936 model any better than the 1916 model? I do not know any objective method of approach to that question. Those of you who are expecting me to answer it tonight will be disappointed. I am by nature a timid soul and I have no desire to place my life in jeopardy. I should like to make one observation, however, and I am sure that you will understand the spirit in which I make it. That observation is that in my judgment the healthiest sign in the School of Medicine of the University of Maryland has been the willingness of the Faculty of that School to go outside its own membership, when necessary, and even outside Maryland, in order to secure the type of man it wanted for its professorial chairs. This is a factor of the greatest importance in any educational institution, for nothing kills faculties more surely than local inbreeding. By the same token nothing helps so much as the introduction of new blood from time to time. That Dr. Rowland shares this point of view is clearly shown by his record as Dean.

When we make our comparison on the basis of these four factors, plant, income, instruction and faculty, we cannot fail to be impressed with the great development that has taken place in the School during the last two decades. Now I do not mean to infer that Dr. Rowland alone has been responsible for all of that development. He would, I know, be the last person to make any such claim. Besides, these things are never the work of one man. I cannot escape the conclusion, however, that he must have had a large share in that development, and I cannot refrain from reminding you of Marshall Joffre's celebrated reply when he was asked who won the first battle of the Marne. You will recall that he answered, "I do not know who won it, but if it had been lost I know who would have gotten the blame."

I should like to say a word concerning Dr. Rowland's record as a representative of the University of Maryland in two medical organizations where I have had abundant opportunity to observe him at close quarters. These organizations are the Association of American Medical Colleges and the Medical Advisory Board of the City Hospitals. I may explain that the Association of American Medical Colleges is a national educational organization which meets annually in the interests of medical education. It is a meeting place for medical deans, where they may share each other's troubles. During the past seven years Dr. Rowland and I have attended the meetings of this organization together. I shall not tell you all that Dr. Rowland

does at those meetings—there is honor even among Deans!—but I can say that he commands the respect of all the delegates who know him and whenever he discusses a paper he is listened to with real attention. He was formerly Vice-President and on one occasion prevented action being taken that would have been detrimental to the interests of another part of the University of Maryland. As a co-member of the Medical Advisory Board of the City Hospitals I have had the opportunity to witness Dr. Rowland's reactions to the various matters which have come before that Board for consideration. I feel certain that the other members of that Board will agree with me when I say that all of us have been impressed with the wisdom of his counsel and with what may be termed his essential sanity. The Medical Faculty of the University of Maryland may rest assured that it has been well represented by Dr. Rowland in both of these organizations.

And now may I leave the stricter confines of my subject and refer briefly to the relations between the two medical schools of Baltimore? I think that they have never been more cordial than they are at this very moment. This is due in large measure, as I well know, to a conscious effort upon the part of Dr. Rowland to do all he could to foster friendly relations between the two institutions. In this field of good will, as in the field of medical education, he has also achieved success, and I am happy to have the opportunity to testify to that fact. I should also like to acknowledge my own personal debt to Dr. Rowland for the uniform kindness and courtesy which he has shown me in all of our dealings, both official and otherwise, and also to express my gratitude to him for keeping me out of trouble. I wish to congratulate the Medical Faculty of the University of Maryland on having such a good Dean.



## DR. ROWLAND, THE PHYSICIAN\*

MAURICE C. PINCOFFS, B.S., M.D.†

BALTIMORE, MD.

My theme is "Dr. Rowland, the Physician," but I shall not attempt to keep closely to it. There are men who have multiple personalities to fit the varied rôles they assume, but Dr. Rowland has as his most outstanding characteristic that he is all of one piece and that he is found always the same—as a physician, a teacher, a dean or a public citizen. He was built of sturdy and sound stuff, physically and mentally, and in all the parts he has been called upon to play he has felt no need to change. The same man shows in all the rôles. Our Dean is no chameleon.

There are Americans of many generations' standing who are in no way typical of America. There are true Americans who are of recent vintage. But you will all agree that a second characteristic of the man we honor tonight is that he is the authentic American type of which we are all most proud—American in his ancestry, American in his Maryland birth, and most American of all in his self-made career. To the collectors of Americana I recommend Dr. Rowland; they will scarcely find a finer specimen.

Dr. Rowland typifies the country born boy who makes his way to leadership in the city. He was born in the beautiful rolling countryside near the Susquehanna River and spent his boyhood there. He grew up in a period of depression among a community of Scotch Presbyterians, Quakers and Baptists who met hard times by tightening their belts and working longer hours so as to continue to pay their debts. Behind him and guiding him lay a long ancestry of teachers, of farmers and of builders. He walked six miles to school; he chopped wood and carried water. At sixteen years he could hold his own in a day's work with men. He knew to a penny what a dollar was worth and to whom each penny in it was rightfully due.

In time, at thirteen years of age he entered West Nottingham Academy, a famous Presbyterian school just north of the river. Its simple brick buildings in a grove of trees, its bare wooden floors, hard benches, stern rules and sound teachers had been transmuting raw boys into purposeful men for over a hundred years when Rowland entered. They are doing so still. He went out after graduation

\* Address at the Rowland Day Dinner, December 18, 1936.

† Professor of Medicine, School of Medicine, University of Maryland.

inspired to be a teacher and taught school on the Eastern Shore for two years. Then with his savings he came to Baltimore to study medicine. He had been forged and tempered in the country and he was ready to let the keen edge of his mind with the weight of mature purpose behind it bite into the obstacles ahead.

In 1892 he graduated from the Baltimore Medical College, an honor man, fourth in a class of eighty-one. He plunged at once into the double task of teaching and practising. He wanted to teach and he taught what he was assigned. The first assignment was Latin but soon he was demonstrating anatomy, instructing in clinical surgery, lecturing on medical diagnosis and nervous diseases and even teaching the diseases of the nose and throat. For eight years he covered these fields, giving himself thereby an excellent postgraduate course. All the while he was building up a name as a general practitioner, a surgeon and an insurance examiner. Almost from the start, however, he had taken part in an extramural quiz course on obstetrics. It was so popular that at times 150 students were registered for it. In 1900 he was appointed Professor of Obstetrics and Chief Physician of the Maryland Lying-in Hospital with thirty-six white and fifteen colored beds. His distinguished professional career as an obstetrician was thus begun at an early age by assuming a heavy responsibility.

Dr. Rowland has just retired from active practice. The thirty-six years in which he has been among the leaders in the practice of obstetrics are behind him. Their significance is double. There is in them a history of service to individuals of which any man might be proud and also the story of contributions to the advancement of his chosen specialty.

As a practicing physician those who have worked longest with him admire his skill, his sound and decisive judgment in emergencies, his wealth of carefully accumulated observations. But his patients were less reasoned in their opinion. They merely felt the utmost confidence in him. He was wise, he was sure, he was their friend and there was peace from worry now that he had come.

Our city and state are full of women who have felt thus, placing their lives confidently in his strong, capable hands. Perhaps in the final assessment this gift of inspiring confidence may be the one ranking highest, for it was fairly earned by personal rectitude, by self-confidence based on study and experience and by a natural kindliness that showed in every word and act.

We of the medical profession take a deep personal pride in the career of those of us who live up to the high standards of the true

physician. Our tribute is to the man to whom the financial reward is an accessory aspect and not the vital factor in dealing with his patients. We know that in this regard Dr. Rowland is our standard-bearer. Though he can name yearly from the debutante list those whom he has brought into the world, he has not failed even under the press of the heaviest work to give his services also to many who came from modest homes in the side streets and even the alleys of our city. Then again, when with the passing of the Baltimore Medical College Dr. Rowland was called to the University of Maryland and a few years later was offered the position of Dean, he must have known that to assume this difficult task meant serious sacrifices of lucrative practice. He did not hesitate. Dr. Rowland is the least mercenary of men as far as his finances are concerned. I hasten to add, however, that he has a strong touch of the Scotch where school money is involved.

Dr. Rowland's contribution to the level of obstetrical practice in this country has been a considerable one. Never a radical, he has always been sanely progressive. He was a leader among those who have achieved an alleviation of the duration and the pain of labor both by minor surgical procedures and by improvements in the results of the major operation of cesarean delivery. His greatest influence, however, has been through his teaching. At least 3,000 students have gone out into practice carrying notes of his lectures, his demonstrations, his clinics and ward rounds. I wonder how often in far scattered regions, what he taught has been a guide to these men, how often when burdened with a vital decision it has been these notes of what Rowland advised which have led to the correct action. His teaching is plain, forceful, clear and direct. He has an enormous respect for facts and common sense. Theories change but facts and principles remain.

Others have spoken of Doctor Rowland's work as Dean. There was a splendid appreciation from President Byrd; and Dean Chesney has told us what part he has played in medical education and in raising the standing of our school. Yet this work for which he is chiefly honored today deserves a brief view from yet another angle, that of his relation with the Faculty. That Rowland became Dean in a confused time of factions and dissension was in itself a tribute to his integrity and fairness of mind. That reputation has only increased with the years. His quiet, steadying influence has enormously accelerated the passage into a period of unity and peace now already of many years' duration. In the fifteen years of my own association with him, his council, his encouragement, his optimism and his staunch

friendship have been a constant help. All go to Dr. Rowland with their needs, their ambitions and, I fear, their complaints. Many a man would be overwhelmed. He has remained serene in adversity, has retained balance in success and never has ceased pressing optimistically forward.

There is something indomitable in this man Rowland—hardships, disappointments, grinding years of work, personal sorrows he has borne, as well as success and the love and admiration of his colleagues. He has met them all without alteration of character or point of view. Scars he may bear but they are hidden.

Outside the window of Dr. Rowland's office at the University stands a great tree which must date back to when the building stood at the edge of the growing town of Baltimore and from its portico one looked over the falling meadowlands down to the harbour. The busy city has surrounded it with high buildings, turmoil and confusion, but under it young students gather and each year the vigorous green of its spring foliage shows that the sap runs strong through its great trunk. I like to think of our Dean as the sturdy oak of our academic grove. Born in the quiet fields, life has immured him in the center of the cities' problems, hedged him about with responsibilities and with the hurry and confusion of a busy life. Erect he stands, full of the sap of life, strong and outstanding among the younger men about him. May you go on, Dr. Rowland, as long as the great tree on our campus and long may we work at your side.

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#### DR. ROWLAND, THE CITIZEN

An address was delivered by The Hon. Samuel K. Dennis, Chief Judge of the Supreme Court of Baltimore City, on "Dr. Rowland, The Citizen." Judge Dennis' extemporaneous talk was most interesting, humorous and to the point, and it is indeed regrettable that it cannot be reproduced here.

DR. ROWLAND, THE MAN\*

CHARLES REID EDWARDS, M.D.†

BALTIMORE, MD.

Portrayed in oil by Dr. Corner, modeled in clay for a bronze casting by his daughter, deified by Dr. Pincoffs, extolled as a medical educator by Dr. Kitchin, thoroughly endorsed as a Dean by another Dean, Dr. Chesney, and paraded before us as a model citizen by Judge Dennis—Dr. Rowland, The Man is assigned to me for final discussion.

I am deeply appreciative of the honor bestowed upon me and grateful to the committee on arrangements for choosing the title of my address. After all that we have heard today I must endeavor to bring this man Rowland back to earth, for many of us here tonight hope to continue to work with him for many years and I must therefore reduce him to the level of the rest of us humans.

You have heard from other speakers much about Dr. Rowland's boyhood days. Born in Cecil County, Maryland, he attended a country school for short periods and helped his father as a stonemason. It is reported that many houses now standing in that locality were built by the elder Rowland and his young son and that some of those along the beautiful Susquehanna River were only recently submerged when the Conowingo Dam was built.

The road from trowel to sugar tongs was long and difficult, but he made it.

After completing his studies at West Nottingham Academy he came to Baltimore and studied medicine. Upon graduation he entered practice and became greatly interested in obstetrics. Prior to this time most of the negro mothers were under the care of midwives. Obstetrician Rowland disapproved of this and was instrumental in creating laws to govern the activities of midwives. The results were extraordinary and both maternal and infant mortality decreased rapidly. A new generation of negroes grew up and provided such wonderful material for medical school teaching that the City Fathers were persuaded to permit the consolidation of various branches of medical education in order to use this fine material. Thus did Dr. Rowland demonstrate his strategy.

You have heard much of Dr. Rowland's many human qualities. There is no doubt about them. He is so human that we all notice it. There never was an executive who could appoint more committees

\* Address at the Rowland Day Dinner, December 18, 1936.

† Professor of Clinical Surgery, School of Medicine, University of Maryland.

than can Dean Rowland and with unprecedented accuracy he can avoid serving on any of them.

One of the very outstanding qualities of Dr. Rowland is his love of play. He has told me many times that he never takes a vacation, but somehow he finds time to play as he works. He is fond of fishing and has some rare experiences to relate. He has been a pool shark of such magnitude that at the University Club, where he has defeated all contenders, he was unanimously elected Vice-President to get him away from the pool tables.

It was on the golf course, however, that he excelled. I played with him for the first time several years ago without knowing of his enviable record. The game began rather quietly. After each of us had taken several strokes he informed me that he had never taken a lesson. Then I began to make observations. At first I was surprised, then I was challenged, and finally awed. I began to wonder how I could relate my experiences. His conduct beggared description in ordinary language. What experience had I gained in the past that would aid me now? I racked my brain. In history? No. In medicine? No. In mathematics? Well, there is algebra. I never did like it. I was brought up to believe that an honest statement is always the correct one to make, even though it hurts. To spar with the truth was algebra with its evasive principles, never a direct answer. Why let  $X$  equal the unknown? If I bought anything and asked the price, I did not want the salesman to say we will let  $X$  equal that.

Suppose in Judge Dennis' Court one of you doctors when on the witness stand should answer by saying, "We will let  $X$  equal the injuries," when interrogated by the attorney. What do you think would happen to you?

Or when Dr. Rowland was in the prime of his career and an anxious prospective father approached with the following conversation: "Well doctor, how are things progressing?" Answer: "Very well, young man, very well indeed." Expectant father: "Well doctor, are there to be one or two?" Dr. Rowland: "I do not know, young man. Science fails here and we will have to let  $X$  equal the number."

No, algebra has a subtle influence on one's character. It promotes obscurity. It tends to destroy frankness. It fosters elusiveness. Let  $X$  equal the unknown.

But I had played golf with Dr. Rowland. Now it came to me like a great light. Let  $X$  equal the unknown. Why, of course. It could equal nothing else, it had no other value.

I had read a book of instructions on how to play golf. The first

lesson described how one should hold the club. Well, Dr. Rowland began in true algebraic style. He grasped the club in X fashion. Then the book stated that the stance should be comfortable and graceful. Dr. Rowland's stance reminded me of the leaning tower of Pisa. The back swing—oh yes, this was to be accomplished by a long, slow, progressive movement terminating in a pause before beginning the down stroke. What did I see—an abortive movement which should have been unpopular with one practicing his profession. And then the follow through after hitting the ball! Well, this stroke was so interrupted that it must have been left on the last green. But the scores—always the lowest—always Rowland the winner. Yes, X, the unknown quantity.

In closing I want to impress you all with the fact that in Dr. Rowland, *The Man*, we know one whose humanity is humanely human.

Dr. Rowland, in terminating the day's festivities which have been arranged in your honor, I want to express the wish of your many friends gathered here tonight that you may continue to enjoy good health and that you will be spared for many years of usefulness among us, and to assure you of our abiding friendship.

Near the end of the dinner Dr. Rowland was presented with a bound leather volume containing the following opening paragraph:

Dr. J. M. H. Rowland:

Your associates wish to express to you their esteem and sincere friendship; their appreciation of your many years of unremitting work in the field of medicine as a physician and as Professor of Obstetrics and Dean of the University of Maryland, School of Medicine. They wish to assure you that your influence will live at the University for many years to come, and that your council and advice with which you have been so generous has been of inestimable value to them and to the School. They have caused to be affixed hereto their signatures.

The remainder of the book contained the signatures of almost everyone who contributed to make the entire occasion such a complete success.

# ALUMNI ASSOCIATION SECTION

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The names listed above are officers for the term beginning April 15, 1937, and ending June 30, 1938.

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## SPRING ACTIVITIES

The Board of Regents, The President and the Board of Directors of the Alumni Association, together with the Dean and Medical Council of the School of Medicine of the University of Maryland, cordially invite you to attend these activities.

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## PROGRAM

JUNE 2ND, 1938

- 9:00 A.M.—Registration at the Main University Building.  
10:00 A.M.—12 M.—Inspection of University Hospital and Clinics.  
1:00 P.M.—Luncheon University Hospital.  
2:00 P.M.—Annual Meeting of the Medical Alumni Association,  
University Hospital.  
3:00 P.M.—6:00 P.M.—5-Year Class Reunions.  
7:00 P.M.—Annual Banquet, Lord Baltimore Hotel.



## GUESTS OF HONOR

H. C. BYRD

*President of the University of Maryland*

HIS EXCELLENCY, THE HONORABLE HARRY W. NICE

*Governor of Maryland*

THE HONORABLE HOWARD W. JACKSON

*Mayor of Baltimore*

J. M. H. ROWLAND, M.D.

*Dean of the School of Medicine*

## MEMBERS OF THE BOARD OF REGENTS

## GRADUATES OF 1938 SCHOOL OF MEDICINE, UNIVERSITY OF MARYLAND

The following classes have expressed their intention to hold a reunion this year:

Class of 1933

Class of 1928

Class of 1923

Class of 1918

Class of 1913—U. of Md.

P. &amp; S.

B. M. C.

Class of 1908—U. of Md.

P. &amp; S.

B. M. C.

Class of 1903—U. of Md.

P. &amp; S.

B. M. C.

Class of 1898—U. of Md.

P. &amp; S.

B. M. C.

Class of 1893—U. of Md.

P. &amp; S.

B. M. C.

Class of 1888—U. of Md.

P. &amp; S.

B. M. C.

NOTE: The reunions will include the graduates from the College of Physicians and Surgeons, University of Maryland and the Baltimore Medical College. Any other classes desiring to hold reunions will please communicate with the Medical Alumni Office, Lombard and Greene Streets, Baltimore, Maryland, which will be pleased to help in every possible way to make the affair a success.

JUNE 4TH, 1938

11:00 A.M.—Commencement Exercises, Ritchie Coliseum, College Park, Md.

*Secretary of the Medical Alumni Association.*

Kindly send . . . . . ticket .. for the Alumni Banquet of the Medical Alumni Association, University of Maryland, to be held at the Lord Baltimore Hotel on Thursday evening, June 2nd, 1938, at 7 P.M.

will

I *or* be present for the luncheon.

will not

Enclosed please find subscription at \$2.50 per ticket.

Name.....

Address.....

*(Detach and mail to: MEDICAL ALUMNI ASSOCIATION  
Lombard and Greene Streets, Baltimore, Md.)*

Programs may be obtained at the time of registration.

ANNOUNCEMENT

10TH ANNIVERSARY REUNION CLASS OF 1928

The Baltimore Alumni of the class of 1928 have already met several times to discuss and plan activities in connection with the celebration of this anniversary in June. Begin planning now to attend the reunion June 1 to 4. Satisfy the urge to see old friends and classmates and renew old acquaintances. See the progressive changes that have taken place at your Alma Mater in the past decade. Be guests of the Baltimore Alumni at a class crab feast, Wednesday, June 1st, and join us at the Alumni Banquet on June 2nd. Watch for a letter in the near future with more details.

C. G. WARNER (Publicity Sec.)

ITEMS

The Twelfth Annual Clinic of the Highland Park Physicians' Club was held on December 1, 1937 at the Highland Park General Hospital Nurses' Home, Highland Park, Detroit, Michigan. Dr. B. Friedlaender (B. M. C. 1898) was elected President of the Club for 1937-38.

Dr. H. Russell McConnell (U. of M. 1924), F.A.C.S., formerly of 409 Howie Avenue, Gastonia, North Carolina is now located at 1119 Cumberland Avenue, Fairmount Park, Gastonia. Dr. McConnell was re-elected chief-of-staff of the Garrison General Hospital for 1938. He was also elected president of the Gaston County Medical Society for the current year.

Colonel Roger Brooke (B.M.C. 1900), commanding officer at Letterman General Hospital, Presidio—San Francisco, California, has been selected for the position of assistant to the Surgeon General of the U. S. Army and raised to the rank of Brigadier General.

In addition to unusual administrative and executive ability, for which General Brooke was cited during service in the World War and awarded the distinguished service medal, he is one of the outstanding clinicians in America and this well deserved honor comes as a recognition of his signal ability and preeminent merit.

Doctor Howard B. Mays (U. of M. 1935), formerly assistant resident surgeon at the University Hospital, Baltimore, took up his new duties as resident surgeon on the urological service at the Boston City Hospital, Boston, on January 15, 1938.

Doctor Morris J. Nicholson (U. of M. 1936), formerly senior interne at the University Hospital, Baltimore, has joined the staff of the Lahey Clinic, Boston. He will specialize in anesthesia.

Doctor Thomas F. Vestal (U. of M. 1929), formerly of Red Lion, Pennsylvania, has joined the staff of the Worcester County Sanatorium, Worcester, Massachusetts. He will be associated with Doctor E. W. Glidden (U. of M. 1907), superintendent of the institution.

## NOTICES

The Mental Hygiene Society of Maryland, through its Executive Secretary, Dr. Ralph P. Truitt, announces a Mental Hygiene Conference for Thursday and Friday, April 7th and 8th, 1938. The Conference will be held at the Medical and Chirurgical Faculty Building, 1211 Cathedral Street, Baltimore.

The program of the Conference, now being completed, will be made possible by the cooperation of the American Association of Medical Social Workers, American Association of Social Workers, Board of Mental Hygiene, Bureau of Catholic Charities, Child Study Association, and the Maryland State Conference of Social Welfare.

There will be five sessions of the Conference and each session will be devoted to one of the strategic forces in the community having to do with the central theme of the Conference—"A Program for Promoting Better Mental Health in the Community With the Resources Available."

What the parent, teacher, minister, social worker and employer can do to promote better mental health in their jobs, will be discussed by nationally prominent people in those fields. At the end of the last

session the gist of the material presented in all sessions will be summarized in an effort to bring together a community program for promoting better mental health.

It is hoped that the Conference will serve as a medium for the free discussion of these rather vital questions and should be of interest not only to workers in special fields, but to the general public as well.

Further plans for the Fifth Annual Luncheon-Meeting of the New England Alumni have been worked out following a meeting in Boston, in late January, of Doctors Thomas F. Tierney (B. M. C. 1901), A. B. Shoemaker (U. of M. 1908), Charles W. Finnerty (P. & S. 1913) and Charles E. Gill (U. of M. 1927), in collaboration with a committee of six alumni, one from each of the six New England states. The next function will be held on Wednesday, June first, at the Hotel Statler, Boston, at 12:30 P.M. This will be the second day of the Annual Meeting of the Massachusetts Medical Society. Final notice will be sent out in late May to the five hundred alumni of these three schools in the New England states, along with suitable items in the New England Journal of Medicine.

#### ANNOUNCEMENT OF POSTGRADUATE SEMINAR OF THE DEPARTMENT OF PEDIATRICS

JUNE 6TH TO JUNE 25TH, 1938

The University of Maryland offers a postgraduate course in Pediatrics, which is planned primarily for the physician in general practice as well as the physician especially interested in children.

The schedule of the course is given on the following pages. Any questions as to further details will be answered by applying to the Dean of the School of Medicine, University of Maryland, Baltimore.

The course is so arranged that nearby physicians will find it possible to spend the morning at the University and then return to their practice for the afternoon, if the entire course is not desired.

*Requirements for admission:* The applicant must be a registered physician in good standing. Preference will be given to physicians registered in Maryland.

*Fees and Tuition:* A matriculation fee of \$50.00 will be charged to all registrants.

*Registration and Matriculation:* Monday, June 6, 1938, 8.30 A.M., northeast corner of Lombard and Greene Streets, Baltimore.

Application should be made as early as possible to the Dean of the School of Medicine, as the enrollment will be limited.

## PEDIATRIC POSTGRADUATE SCHEDULE

Prof. C. Loring Joslin, Director

## FIRST WEEK

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9:00-10:00	Anatomy and Physiology of the Normal Child <i>Dr. Howell</i>	Fundamentals of Nutrition <i>Dr. Joslin</i>	Surgical Diagnosis in Children <i>Dr. Shipley</i>	Poliomyelitis <i>Dr. Jaffe</i>	Infant Feeding <i>Dr. Joslin</i>	X-ray Conference <i>Dr. Walton</i> <i>Dr. Bradley</i>
10:00-11:30	Bedside Rounds Babies' Wards <i>Dr. Joslin</i>	Bedside Rounds Babies' Wards <i>Dr. Jaffe</i>	Child Guidance <i>Dr. Newell</i>	Bedside Rounds <i>Dr. Joslin</i>	Clinical Pathological Conference <i>Dr. Spencer</i> <i>Dr. Bradley</i>	Intracranial Complications of Otitis <i>Dr. Arnold</i>
11:30-12:30	Electrocardiography <i>Dr. Love</i>	Diseases of the Genito-urinary Tract in Children <i>Dr. Toulson</i>			Ear Clinic <i>Dr. Downey</i>	Diseases of the Newborn <i>Dr. Finkelstein</i>
12:30-1:00	Lunch					
1:00-2:00	Clinical Pediatrics Dispensary <i>Dr. Traband</i>	Clinical Pediatrics Dispensary <i>Dr. Finkelstein</i>	Bedside Rounds City Hospital <i>Dr. Goodwin</i>	Contagious Diseases Sydenham Hospital <i>Dr. Tull</i>	Clinical Pediatrics Dispensary <i>Dr. Seabold</i>	Clinical Pediatrics Dispensary <i>Dr. Howell</i>
2:00-4:00	Allergy Clinic <i>Dr. Bubert</i>	Clinic Nose and Throat Diseases <i>Dr. Looper</i>			Pediatric Technique <i>Dr. Christensen</i>	

## SECOND WEEK

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9:00-10:00	Preventive Pediatrics <i>Dr. Howell</i>	Nephritis <i>Dr. Bradley</i>	Diabetes in Children <i>Dr. Stein</i>	Rocky Mountain Spotted Fever Typhus Fever <i>Dr. Jaffe</i>	Pneumonia <i>Dr. Bradley</i>	Diseases of the Newborn <i>Dr. Finkelstein</i>
10:00-11:30	Bedside Rounds Children's Wards <i>Dr. Jaffe</i>	Bedside Rounds Children's Wards <i>Dr. Joslin</i>	Child Guidance <i>Dr. Newell</i>	Clinic Typhoid Fever in Children <i>Dr. Joslin</i>	Clinic Malnutrition <i>Dr. Joslin</i>	Ward Rounds <i>Dr. Jaffe</i>
11:30-12:30	Child Hygiene <i>Dr. Warthen</i>	Tuberculosis Clinic <i>Dr. Finkelstein</i>	Eczema Clinic <i>Dr. Seabold</i> <i>Dr. Taylor</i>	Neurosurgery Operations or Lecture <i>Dr. Bagley</i>		
12:30-1:00	Lunch					
1:00-2:00	Clinical Pediatrics Dispensary <i>Dr. Finkelstein</i>	Allergy Clinic <i>Dr. Bubert</i>	Contagious Diseases Sydenham Hospital <i>Dr. Tull</i>	Bedside Rounds City Hospital <i>Dr. Goodwin</i>	Clinical Pediatrics Dispensary <i>Dr. Seabold</i>	Clinical Pediatrics Dispensary <i>Dr. Howell</i>
2:00-4:00	Laboratory Technique and Diagnosis <i>Dr. Mills</i>	Laboratory Technique and Diagnosis <i>Dr. Mills</i>			Laboratory Technique and Diagnosis <i>Dr. Mills</i>	

## THIRD WEEK

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9:00-10:00	Clinic Diarrhea Dysentery <i>Dr. Joslin</i>	Prematurity <i>Dr. Seabold</i>	Habit Training <i>Dr. Howell</i>	Sulfanilamide Therapy <i>Dr. Bradley</i>	Clinic Intracranial Hemorrhage in Newly-born <i>Dr. Joslin</i>	Demonstration Diet Kitchen <i>Miss Malzen</i>
10:00-11:30	Bedside Rounds Children's Wards <i>Dr. Jaffe</i>	Bedside Rounds Children's Wards <i>Dr. Joslin</i>	Diseases of Blood and Lymphatic System <i>Dr. Bradley</i>	Bedside Rounds Children's Wards <i>Dr. Joslin</i>	Bedside Rounds Children's Wards <i>Dr. Jaffe</i>	Clinical Pathological Conference <i>Dr. Spencer</i> <i>Dr. Bradley</i>
11:30-12:30		Traumatic Surgery Incl. Fractures <i>Dr. Shipley</i>			Physiotherapy	Pediatric Conference <i>Dr. Joslin</i>
12:30-1:00	Lunch					
1:00-2:00	Bone and Joint Diseases Kernan's Hospital <i>Dr. Voshell</i>	Syphilis Clinic <i>Dr. Robinson</i>	Tuberculosis in children Eudowood Sanatorium <i>Dr. Finkelstein</i>	Bedside Rounds City Hospital <i>Dr. Goodwin</i>	Clinical Pediatrics Dispensary <i>Dr. Finkelstein</i>	
2:00-4:00		Bronchoscopic Clinic <i>Dr. Looper</i>			Clinical Pathology <i>Dr. Warner</i>	

## DEATHS

- Barron, John Ingram**, York, S. C.; class of 1901; served during the World War; aged 62; died, October 23, 1937.
- Blackburn, Thomas C.**, Hickory, N. C.; B. M. C., class of 1896; aged 68; died, November 29, 1937, of myocarditis.
- Braswell, Mark Russell**, Rocky Mount, N. C.; class of 1886; aged 72; died, November 15, 1937, in the Stuart Circle Hospital, Richmond, Va., of cerebral hemorrhage.
- Brothers, Thomas Jefferson**, Anniston, Ala.; P. & S., class of 1903; served during the World War; aged 57; died, September 1, 1937, of coronary thrombosis and arteriosclerosis.
- Burby, John E.**, Peoria, Ill.; B. M. C., class of 1895; aged 67; died, November 9, 1937.
- Casto, Donza Clarence**, Parkersburg, W. Va.; B. M. C., class of 1899; aged 60; died, October 24, 1937, of hypertension and nephritis.
- Cherry, Solomon Leon**, Clarksburg, W. Va.; class of 1908; served during the World War; aged 50; died, October 21, 1937.
- Cox, Ernest Lee**, Jacksonville, N. C.; class of 1889; aged 72; died, September 17, 1937, of chronic myocarditis.
- Drach, John H.**, Cockeysville, Md.; class of 1880; aged 77; died, in the Maryland General Hospital, Baltimore, Md., September 11, 1937.
- Duffy, Leinster**, New Bern, N. C.; P. & S., class of 1889; aged 79; died, September 29, 1937, of cirrhosis of the liver with biliary obstruction.
- Duncan, Charles Lucas**, Beaufort, N. C.; class of 1902; aged 65; died, September 4, 1937, of arteriosclerosis and partial hemiplegia.
- Eggleston, William M.**, Vicksburg, Miss.; Washington University School of Medicine, class of 1875; aged 81; died, September 19, 1937, of malignancy of the pancreas.
- Frontis, David Beaty**, Ridge Spring, S. C.; class of 1880; aged 81; died, September 24, 1937, in the Columbia Hospital, Columbia, S. C., of pneumonia.
- Garrabrant, Clarence**, Atlantic City, N. J.; P. & S., class of 1886; aged 81; died, September 30, 1937, of chronic prostatitis with obstruction.
- Hanlon, Joseph P.**, Fall River, Mass.; B. M. C., Class of 1903; aged 64; died, February 2, 1938.
- Huff, Charles William**, Jackson, Wyo.; B. M. C., class of 1912; aged 49; died, September 22, 1937, at Idaho Falls, Idaho, of agranulocytosis.



- Jones, William Thompson**, Laurel, Del.; class of 1895; past president of the Delaware State Medical Society; aged 68; died suddenly, October 22, 1937.
- MacFarland, Erwin Golly**, Utica, N. Y.; B. M. C., class of 1908; served during the World War; aged 52; died, September 9, 1937, of mitral stenosis and myocarditis.
- Marcoux, Ephrem Alphonse**, Fall River, Mass.; B. M. C., class of 1904; aged 56; died, October 9, 1937, of pulmonary tuberculosis.
- McGrath, William F.**, North Adams, Mass.; B. M. C., class of 1894; aged 73; died, February 2, 1938, of heart disease.
- Meierhof, Edward Lee**, New York City; class of 1881; aged 76; died, October 25, 1937, of carcinoma.
- Merrill, Solon W.**, Flushing, N. Y.; P. & S., class of 1907; aged 56; died, September 15, 1937, of hypertrophy of the prostate and pulmonary embolism.
- Murphy, Frank P.**, B. M. C., class of 1885; received degree of Bachelor of Arts from Loyola College; member of the Medical and Surgical Faculty in 1892. Among other bequests he left the sum of \$500 to the Board of Regents of the University of Maryland for research work in the University Hospital. He also left \$1,000 to the James Lawrence Kernan Hospital for Crippled Children. Dr. Murphy died December 31, 1937.
- Olive, Percy Wingate**, Fayetteville, N. C.; P. & S., class of 1907; aged 58; died, October 12, 1937, in the Pittman Hospital, of acute dilatation of the heart.
- Pearlstine, Kivy I.**, Charleston, S. C.; class of 1906; aged 53; on the staff of the Riverside Infirmary, where he died, November 25, 1937, of coronary thrombosis.
- Reiter, Albert S.**, Myerstown, Pa.; P. & S., class of 1882; aged 79; died, September 1, 1937, of arteriosclerosis.
- Rich, Charles Edwin**, Lynn, Mass.; B. M. C., class of 1902; aged 62; died, October 2, 1937, of adenocarcinoma of the sigmoid.
- Spillman, John William**, Amsterdam, Ohio; B. M. C., class of 1905; aged 59; died, November 17, 1937, of angina pectoris.
- Wilkinson, Vernon Stevens**, Cardiff, Md.; class of 1914; served during the World War; aged 48; died, August 30, 1937, in Atlantic City, N. J., of aortic stenosis and mitral insufficiency.



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Physicians and Surgeons*



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## CALENDAR FOR 1938-39

### SCHOOL OF MEDICINE

#### FIRST SEMESTER

1938

September 20	Tuesday	*Registration for first and second-year students
September 21	Wednesday	*Registration for all other students
September 22	Thursday	Instruction begins with the first scheduled period
November 23	Wednesday	Thanksgiving recess begins after the last scheduled period
November 28	Monday	Instruction resumed with the first scheduled period
December 21	Wednesday	Christmas recess begins after the last scheduled period -

1939

January 3	Tuesday	Instruction resumed with the first scheduled period
January 23	Monday	
to	to	*Registration for the second semester
January 28	Saturday	
January 28	Saturday	First semester ends after the last scheduled period

#### SECOND SEMESTER

January 30	Monday	Instruction begins with the first scheduled period
February 22	Wednesday	Washington's Birthday—Holiday
April 5	Wednesday	Easter recess begins after the last scheduled period
April 12	Wednesday	Instruction resumed with the first scheduled period
June 3	Saturday	Commencement

#### PARTIAL CALENDAR FOR 1939-1940

1939

September 19	Tuesday	*Registration for first and second-year students
September 20	Wednesday	*Registration for all other students
September 21	Thursday	Instruction begins with the first scheduled period

\* A student who neglects or fails to register prior to or within the day or days specified for his or her school will be called upon to pay a fine of five dollars (\$5.00). The last day of registration with fine added to regular fees is Saturday at noon of the week in which instruction begins following the specified registration period. (This rule may be waived only upon the written recommendation of the dean.)

\* The offices of the registrar and comptroller are open daily, not including Saturday, from 9:00 a.m. to 5:00 p.m., and on Saturday from 9:00 a.m. to 12:30 p.m., with the following exceptions: Monday, September 12, 1938, until 8:00 p.m.; Saturday, September 24, 1938, until 5:00 p.m.; and on Saturday, January 28, 1939, until 5:00 p.m. Advance registration is encouraged.

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## THE UNIVERSITY OF MARYLAND

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The University has the following educational organization:

- |                                   |                                      |
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| The College of Agriculture,       | The College of Education,            |
| The College of Engineering,       | The College of Home Economics,       |
| The College of Arts and Sciences, | The Graduate School,                 |
| The School of Medicine,           | The Summer School,                   |
| The School of Law,                | The Department of Physical Education |
| The School of Dentistry,          | and Recreation.                      |
| The School of Pharmacy,           |                                      |

The Schools of Medicine, Law, Dentistry and Pharmacy are located in Baltimore; the others in College Park, Maryland.

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LAWRENCE KATZENSTEIN, M.D., Assistant in Medicine.  
LEON ASHMAN, M.D., Assistant in Medicine.  
NATHANIEL BECK, M.D., Assistant in Medicine.  
JOHN A. MYERS, B.E.E., M.E.E., M.D., Assistant in Medicine.  
JOHN ATKINS, M.D., Assistant in Medicine.  
FRANCIS GEORGE DICKEY, A.B., M.D., Assistant in Medicine.  
JEROME FINEMAN, M.D., Assistant in Pediatrics.  
ABRAHAM HURWITZ, M.D., Assistant in Pediatrics.  
CHARLES E. BALFOUR, M.D., Assistant in Neurology.  
BERNEARD BADT, M.D., Assistant in Neurology.  
WILLIAM L. FEARING, M.D., Assistant in Neurology.  
ROBERT F. HEALY, M.D., Assistant in Surgery.  
HERBERT M. FOSTER, M.D., Assistant in Surgery.  
OTTO C. BRANTIGAN, M.D., Assistant in Surgery.  
DANIEL R. ROBINSON, M.D., Assistant in Surgery.  
AMELIA LINK, M.D., Assistant in Dermatology.  
H. HANFORD HOPKINS, M.D., Assistant in Dermatology.  
H. L. GRANOFF, A.B., M.D., Assistant in Gynecology.

## HISTORY OF THE SCHOOL OF MEDICINE

The present School of Medicine, with the title of the University of Maryland School of Medicine and College of Physicians and Surgeons, is the result of a consolidation and merger of the University of Maryland School of Medicine with the Baltimore Medical College (1913) and the College of Physicians and Surgeons (1915).

The School of Medicine of the University of Maryland is one of the oldest foundations for medical education in America, ranking fifth in point of age among the medical colleges of the United States. It was organized in 1807, and chartered in 1808, under the name of the College of Medicine of Maryland, and its first class was graduated in 1810. In 1812 the College was empowered by the Legislature to annex three other colleges or faculties: Divinity, Law, and Arts and Sciences; and the four colleges thus united were "constituted an University by the name and under the title of the University of Maryland."

The beautiful college building at Lombard and Greene Streets, erected in 1812, is the oldest structure in America devoted to medical teaching. Here was founded one of the first medical libraries and the first medical college library in the United States.

Here for the first time in America dissecting was made a compulsory part of the curriculum; here instruction in Dentistry was first given (1837) and here were first installed independent chairs for the teaching of Diseases of Women and Children (1867), and of Eye and Ear Diseases (1873).

The School of Medicine was one of the first to provide for adequate clinical instruction by the erection in 1823 of its own hospital, and in this hospital intramural residency for the senior student was first established.

In 1913, juncture was brought about with the Baltimore Medical College, an institution of thirty-two years' growth. By this association the facilities of the School of Medicine were enlarged in faculty, equipment and hospital connection.

The College of Physicians and Surgeons was incorporated in 1872, and established on Hanover Street in a building afterward known as the *Maternité*, the first obstetrical hospital in Maryland. In 1878 union was effected with the Washington University School of Medicine, in existence since 1827, and the college was removed to Calvert and Saratoga Streets. By the consolidation with the College of Physicians and Surgeons, medical control of the teaching beds in the City Hospital, now the Mercy Hospital, was obtained.

## ORGANIZATION OF THE SCHOOL OF MEDICINE

### LABORATORY FACILITIES

The laboratories are located at two centers, the group of buildings at Greene and Lombard Streets, and at 32 and 34 South Paca Street. The schedule is so adjusted that the laboratory periods are placed with a view of obviating unnecessary movement on the part of the classes. The building known as Gray Laboratory, at Greene and Lombard Streets, houses three departments. The Anatomical Laboratory is placed upon the top floor, where skylights and an auxiliary modern system of electric lighting give adequate illumination of the subjects. The Department of Pharmacology occupies the second floor. There is a large room for the general student laboratory, which is thoroughly equipped with apparatus of recent acquisition, and in addition contains many instruments of unique and original design. With office and stockroom adjoining, this laboratory is complete for student experimentation. On the first floor of Gray Laboratory is the Department of Physiology. In addition to the large student laboratory, which is constructed for groups of fifty-eight students, there are rooms for the departmental office, preparation of material, and storage of apparatus. An additional room is devoted exclusively to mammalian experiments. In this building there is maintained an animal room in which is kept an abundance of material for experimental purposes. The embalming and storage plant for the Department of Anatomy is in physical connection with the building and its special departments. The laboratories of physiology and pharmacology are completely equipped with apparatus and lockers in accord with the best ideas of instruction. The students work in groups of two each, and each group has sufficient apparatus, so that the experimental work can be carried on without delay or recourse to a general stockroom.

The laboratories of Pathology, Bacteriology, Biochemistry and Clinical Pathology are located in the Medical laboratory building on Greene Street north of Lombard.

The Departments of Pathology, Bacteriology and Clinical Pathology use, conjointly, the large modernly equipped student laboratory on the second floor. The capacity is one hundred students. On the second floor there are also students' preparation rooms for the making and sterilization of media, cold storage and incubating rooms and research laboratories for the Departments of Bacteriology and Clinical Pathology.

On the main floor of this building are the offices, library, research and technical rooms of the Departments of Pathology and Bacteriology. The basement is given over to teaching museums, store rooms, students' locker room and lavatories.

The Department of Biological Chemistry is housed on the top floor of this building. The space allotted to teaching includes a large student laboratory equipped with one hundred and thirty-two commodious locker units. It is supplied with gas, hot and cold water, vacuum and direct current service, a special apparatus room, a warm room, a colorimeter room, a balance room, a first-aid room and a stockroom. These rooms have modern laboratory furniture and apparatus, a constant temperature and ventilating system, and are equipped and arranged for economic use of the students' time.

Adjoining the students' space are private offices and laboratories of the staff, a departmental library, a shop and a preparation room.

In the Main Building is the Museum of Anatomy, where are arranged for student reference, specimens which represent the careful selection of material over a period of many years. In the University Hospital is the Student Laboratory for analytical studies by those students who are serving as clinical clerks on the wards. A similar laboratory is maintained in the building at the northwest corner of Saratoga and Calvert Streets, for the student work of the Mercy Hospital.

At 32 and 34 South Poca Street are the Laboratories of Histology and Embryology. These laboratories accommodate the full class, and are equipped with necessary lockers for microscopes and apparatus. The department housed in this building is provided with individual offices, preparation and stockrooms.

## CLINICAL FACILITIES

### UNIVERSITY HOSPITAL

The University Hospital, which is the property of the University of Maryland, is the oldest institution for the care of the sick in the State of Maryland. It was opened in September, 1823, under the name of the Baltimore Infirmary, and at that time consisted of but four wards, one of which was reserved for eye patients.

In 1933-1934 the new University Hospital was erected, and patients were admitted to this building in November 1934. The new hospital is situated at the southwest corner of Redwood and Greene Streets, and is consequently opposite the Medical School buildings. The students, therefore, are in close proximity and little time is lost in passing from the lecture halls and laboratories to the clinical facilities of the new building.

The new hospital has a capacity of practically four hundred beds devoted to general medicine, surgery, obstetrics, pediatrics, and the various medical and surgical specialties. On the second, seventh and eighth floors are centered practically all the clinical and laboratory teaching facilities of the

institution. The north wing of the second floor is occupied by the entire Department of Roentgenology. The east wing houses clinical pathology and special laboratories for clinical microscopy, bio-chemistry, bacteriology, and an especially well appointed laboratory for students' training. The south wing has its electro-cardiographic and basal metabolism departments, with new and very attractive air-conditioned or oxygen therapy cubicles. The west wing contains the Departments of Rhinolaryngology and Bronchoscopy, Industrial Surgery, Ophthalmology, and Male and Female Cystoscopy.

The teaching zone extends from this floor to the eighth floor and comprises wards for surgery, medicine, obstetrics, pediatrics, and a large clinical lecture hall.

On the seventh floor is the general operating suite, the delivery suite, and the central supply station. The eighth floor is practically a students' floor and affords a mezzanine over the operating and delivery suites, and a students' entrance to the clinical lecture hall.

There are practically 270 beds available for teaching. In the basement there is a very well appointed Pathological Department with a large teaching autopsy room and its adjunct service of instruction of students in pathological anatomy.

Owing to its situation, adjacent to the largest manufacturing district of the city and the shipping district, a large number of accident patients are received.

The obstetrical service is particularly well arranged and provides accommodation for forty ward patients. This service, combined with an extensive home service, assures the student of abundant obstetrical training.

During the year ending December 31, 1937, 1061 cases were delivered in the hospital and 871 cases in the outdoor department. Students in the graduating class observed at least thirty-five cases, each student being required to deliver at least ten cases in their homes.

The dispensaries associated with the University Hospital and the Mercy Hospital are organized upon a uniform plan in order that the teaching may be the same in each. Each dispensary has the following departments: Medicine, Surgery, Pediatrics, Eye and Ear, Genito-Urinary, Gynecology, Gastro-Enterology, Neurology, Orthopaedics, Proctology, Dermatology, Throat and Nose, Tuberculosis, Psychiatry, Oral Surgery and Oncology. The University Hospital has also a well-organized Dispensary run in connection with its Outdoor Department.

All students in their junior year work each day during one-third of the year in the Departments of Medicine and Surgery of the dispensaries. In their senior year, all students work one hour each day in the special departments.

The new building, with its modern planning, makes a particularly attrac-



tive teaching hospital and is a very valuable addition to the clinical facilities of the Medical School.

The old hospital building has been remodeled and is occupied by the Out-patient Department. Thus the students of the future have been provided with a splendidly appointed group of clinics for their training in out-patient work. All departments of clinical training are represented in this remodeled building and all changes have been predicated on the teaching function for which this department is intended.

The Department of Art also occupies quarters in this building.

### NEW MEDICAL SCHOOL BUILDING

A new building to house most of the preclinical branches will be completed and equipped ready for occupancy at the beginning of the session of 1939-1940. When the building is completed, not only will all of the preclinical departments of the school be furnished with sufficient space and equipment for teaching and research, but satisfactory space and equipment will be available for research in the clinical departments.

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H. V. LANGELOTTIG, A.B., M.D.

MANUEL LEVIN, M.D.

MEYER W. JACOBSON, M.D.

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LEWIS P. GUNDRY, A.B., M.D., *Chief of Clinic*

WILLIAM G. HELFRICH, M.D.

LOUIS G. LLEWELYN, M.D.

## CARDIOVASCULAR DISEASES

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LOUIS H. DOUGLASS, M.D., *Chief of Clinic*  
J. G. M. REESE, M.D., *Assistant Chief of Clinic*  
M. A. NOVEY, A.B., M.D., *Assistant Chief of Clinic*  
I. A. STEGEL, A.B., M.D., *Assistant Chief of Clinic*  
M. B. BALLARD, M.D. JOHN E. SAVAGE, B.S., M.D.  
MAXWELL L. MAZER, M.D. JOSEPH M. BLUMBERG, B.S., M.D.  
JAROSLAV HULLA, M.D. GEORGE A. HART, M.D.  
MARIUS P. JOHNSON, A.B., M.D. HUGH B. McNALLY, B.S., M.D.  
DUDLEY P. BOWE, A.B., M.D. CATHERINE BLUMBERG, A.B., M.D.  
W. ALLEN DECKERT, A.B., M.D. S. KENDIG WALLACE, M.D.  
FERD. E. KADAN, A.B., M.D.

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*Gynecological Division*

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 THOMAS S. BOWYER, A.B., M.D.  
 BEVERLEY C. COMPTON, A.B., M.D.  
 JOHN C. DUMLER, B.S., M.D.

*Surgical Division*

GRANT E. WARD, A.B., M.D.  
 EUGENE E. COVINGTON, M.D.  
 J. D. MOORES, M.D.  
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 ELDRED ROBERTS, M.D.  
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 MURRAY M. COPELAND, M.D.

## OPHTHALMOLOGY

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FRANK A. HOLDEN, M.D.  
 THOMAS R. O'ROURK, M.D.  
 MILTON C. LANG, M.D.

JOHN G. RUNKLE, M.D.  
 JEROME SNYDER, B.S., M.D.  
 HAROLD C. DIX, B.S., M.D.

## OCCUPATIONAL THERAPY

MISS SUE P. HURT, *Directress*

## SOCIAL SERVICE

MISS GRACE PEARSON, *Directress*

## UNIVERSITY HOSPITAL DISPENSARY

Report from October 1, 1936 to September 30, 1937

<i>Departments</i>	<i>New Cases</i>	<i>Old Cases</i>	<i>Total</i>
Cardiology.....	200	1,306	1,506
Curative Workshop.....	19	296	315
Cystoscopy.....	106	520	626
Dermatology.....	3,289	11,557	14,846
Gastro-Intestinal.....	160	881	1,041
Genito-Urinary.....	562	2,046	2,608
Gynecology.....	1,430	2,983	4,413
Medicine.....	1,745	4,258	6,003
Neurology.....	219	939	1,158
Nose, Throat and Ear.....	1,103	867	1,970
Obstetrics.....	1,490	9,215	10,705
Oncology.....	242	2,007	2,249
Ophthalmology.....	962	2,582	3,544
Oral Surgery.....	759	553	1,312
Orthopedic.....	1,079	3,116	4,195
Pediatrics.....	2,011	10,392	12,403
Physiotherapy.....	249	2,261	2,510
Proctology.....	196	340	536
Protein.....	131	3,744	3,875
Psychiatry.....	73	195	268
Surgery.....	1,859	4,751	6,610
Tuberculosis.....	271	2,076	2,347
Total.....	18,155	66,885	85,040

## MERCY HOSPITAL

The Sisters of Mercy first assumed charge of the Hospital at the corner of Calvert and Saratoga Streets, then owned by the Washington University, in 1874. By the merger of 1878 the Hospital came under the control of the College of Physicians and Surgeons, but the Sisters continued their work of ministering to the patients.

In a very few years it became apparent that the City Hospital, as it was then called, was much too small to accommodate the rapidly growing demands upon it. However, it was not until 1888 that the Sisters of Mercy, with the assistance of the Faculty of the College of Physicians and Surgeons, were able to lay the cornerstone of the present Hospital. This building was completed and occupied late in 1889. Since then the growing demands for more space have compelled the erection of additions, until now there are accommodations for 275 patients.

In 1909 the name was changed from The Baltimore City Hospital to Mercy Hospital.

The clinical material in the free wards is under the exclusive control of the Faculty of the University of Maryland School of Medicine and College of Physicians and Surgeons.

The Hospital adjoins the College building, and all surgical patients from the public wards are operated upon in the College operating rooms. This union of the Hospital and College buildings greatly facilitates the clinical teaching.

Mercy Hospital is the hospital of the United Railways and Electric Company of Baltimore City, and receives patients from the Baltimore and Ohio Railroad Company and from the Pennsylvania Railroad Company and its branches.

### MERCY HOSPITAL STAFF

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EUGENE E. COVINGTON, M.D.

WILLIAM N. McFAUL, JR., M.D.

S. DEMARCO, JR., M.D.

MEYER ZURAVIN, M.D.

DANIEL R. ROBINSON, M.D.

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*Assistant*

J. JEPPI

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*Assistant*

J. JEPPI

*Bronchoscopist*

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*Associate*

F. A. KAYSER, M.D.

*Assistant*

THEODORE A. SCHWARTZ, M.D.

*Proctologist*

CHARLES F. BLAKE, A.M., M.D.

*Assistant*

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*Orthopaedic Surgeon*

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*Urologist*

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*Associates*

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*Dentist*

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*Assistant*

J. J. FOLEY, D.D.S.

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JOSEPH SINDLER, M.D.

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*Associates*

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*Assistants*

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*Associate*

MILFORD LEVY, M.D.

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THOMAS K. GALVIN, M.D.

ERNEST S. EDLOW, A.B., M.D.

JOHN J. ERWIN, M.D.

*Associate Obstetricians*

FRANK K. MORRIS, A.B., M.D.

FRANCIS W. GILLIS, M.D.

## GYNECOLOGICAL DIVISION

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WILLIAM S. GARDNER, M.D.

*Gynecologists*

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EDWARD P. SMITH, M.D.

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*Associate Gynecologists*

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ERNEST S. EDLOW, A.B., M.D.

FRANK K. MORRIS, A.B., M.D.

*Assistant Gynecologists*

FRANCIS W. GILLIS, M.D.

H. L. GRANOFF, A.B., M.D.

## PATHOLOGICAL DIVISION

WALTER C. MERKEL, A.B., M.D.

HUGH R. SPENCER, M.D.

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H. R. PETERS, A.B., M.D.

CHARLES E. BRAMBLE, Ph.D.

*Technicians*

SISTER MARY CELESTE

FRANCES DONOVAN BRAMBLE

ELEANOR BEHR

ANNA WASSELL

X-RAY DEPARTMENT

*Radiographer*

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*Associate*

HARRY L. ROGERS, M.D.

*Assistant*

HARRY ARCHER MILLER, M.D.

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SISTER M. KEVIN

ELIZABETH CROOK

MERCY HOSPITAL RESIDENT STAFF

*Resident Surgeon*

HARRY F. KANE, A.B., M.D.

*Associate Resident Surgeon*

RAYMOND J. LIPIN, M.D.

*Resident Gynecologist*

HAROLD H. BURNS, M.D.

*Assistant Resident Surgeons*

W. LYNN GARLICK, M.D.

E. ALLEN MILLER, M.D.

WILLIAM C. DUNNIGAN, A.B., M.D.

*Medical Resident*

JOHN ATKINS

*Assistant Medical Resident*

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*Resident in Pathology and Assistant Medical Resident*

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*Resident Rhinologist*

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*Rotating Internes*

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WILBUR STARR BROOKS, A.B., M.D.

DONALD D. COOPER, A.B., M.D.

WILLIAM B. CULWELL, M.D.

WILLIAM A. DODD, M.D.

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J. B. SMITH, M.D.

ADAM GEORGE SWISS, M.D.

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## DISPENSARY STAFF

*Surgeons**Supervisor*, RAYMOND F. HELFRICH, A.B., M.D.

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I. RIDGEWAY TRIMBLE, M.D.	RICHARD T. SHACKELFORD, A.B., M.D.
S. DEMARCO, M.D.	WILLIAM N. McFAUL, JR., M.D.
J. W. NELSON, A.B., M.D.	M. H. ZURAVIN, M.D.
SIMON H. BRAGER, M.D.	H. ZUPNIK, M.D.

D. ROBINSON, M.D.

*Genito-Urinary Surgery*

A. J. GILLIS, M.D.	K. D. LEGGE, M.D.
L. K. FARGO, M.D.	

*Orthopedists*

ALBERTUS COTTON, A.M., M.D.	K. H. MASERITZ, M.D.
HARRY L. ROGERS, M.D.	J. GASKEL, M.D.

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SOL SMITH, A.B., M.D.	} <i>Chiefs of Clinic</i>
EARL L. CHAMBERS, M.D.	

MILTON STEIN, M.D.	LOUIS F. KLIMES, M.D.
PHILIP D. FLYNN, M.D.	JOHN W. MACHEN, M.D.

*Cardiovascular Diseases*T. C. WOLFF, LITT.B., M.D., C.M., *Chief of Clinic**Diseases of the Lung*S. SNYDER, M.D., *Chief of Clinic**Diseases of Metabolism*J. S. EASTLAND, A.B., M.D., *Chief of Clinic**Allergic Diseases*H. M. BUBERT, M.D., *Chief of Clinic*

S. SNYDER, M.D.

*Diseases of the Stomach**Supervisor*, JULIUS FRIEDENWALD, M.D.

T. FREDERICK LEITZ, M.D.	THEODORE H. MORRISON, M.D.
MAURICE FELDMAN, M.D.	JOSEPH SINDLER, M.D.

H. WILLIAM PRIMAKOFF, M.D.

*Esophagoscopist*

WAITMAN F. ZINN, M.D.

*Gynecologists*ABRAM S. SAMUELS, A.B., M.D., *Chief of Clinic*THOMAS K. GALVIN, M.D., *Assistant Chief of Clinic*

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ERNEST S. EDLOW, A.B., M.D.	FRANK K. MORRIS, A.B., M.D.

H. L. GRANOFF, A.B., M.D.

*Diseases of Nose and Throat*

WAITMAN F. ZINN, M.D.

BENJAMIN S. RICH, A.B., M.D.	T. A. SCHWARTZ, M.D.
------------------------------	----------------------

BIRKHEAD MACGOWAN, B.S., M.D.

*Diseases of Eye and Ear*

M. RASKIN, M.D.

F. A. PACIENZA, M.D.

J. JEPPI, M.D.

*Dentists*

J. D. FUSCO, D.D.S.

W. INMAN, D.D.S.

A. PENTE, D.D.S.

*Social Service Department*

E. LAMBDEN, M.S., Ph.G.

NORMAN FOXMAN

HARRIET DALY

## MERCY HOSPITAL DISPENSARY REPORT

(Year 1937)

<i>Department</i>	<i>Old</i>	<i>New</i>	<i>Total</i>
Surgery.....	4,113	1,058	5,171
Medicine.....	1,959	567	2,526
Cardiac.....	322	57	379
Diabetic.....	230	13	243
Gynecology.....	617	282	899
Eye and Ear.....	666	323	989
Nose and Throat.....	785	411	1,196
Neurology.....	453	92	545
Pediatrics.....	330	188	518
Gastro-Intestinal.....	419	68	487
Dental.....	144	103	247
Rectal.....	83	43	126
Orthopedics.....	860	223	1,083
Skin.....	572	234	806
Genito-Urinary.....	1,667	232	1,899
Psychiatry.....	77	38	115
Cancer.....	56	8	64
Total.....	13,353	3,940	17,293

## OTHER CLINICAL FACILITIES

## THE BALTIMORE CITY HOSPITALS

The clinical advantages of the University have been largely increased by the liberal decision of the Department of Public Welfare to allow the immense material of these hospitals to be used for the purpose of medical education. There are daily visits and clinics in medicine and surgery by the Staff of the Hospitals. The autopsy material is unsurpassed in this country in amount, thoroughness of study, and the use made of it in medical teaching.

The Baltimore City Hospital consists of the following separate divisions:

The General Hospital, 400 beds, 60 bassinets.

The Hospital for Chronic Cases, 545 beds.

The Hospital for Tuberculosis, 255 beds.

The Psychopathic Hospital, 85 beds.

Infirmary (Home for Aged) 1053 beds.

STAFF OF BALTIMORE CITY HOSPITALS

PARKER J. McMILLIN, *Superintendent*

VISITING STAFF

<i>Physician-in-Chief</i> .....	THOMAS R. BOGGS, B.S., M.D.
<i>Surgeon-in-Chief</i> .....	ARTHUR M. SHIPLEY, M.D., Sc.D.
<i>Physician-in-Chief, Tuberculosis Hospital</i> .....	HARRY M. STEIN, M.D.
<i>Physician-in-Chief, Psychopathic Hospital</i> .....	ESTHER L. RICHARDS, M.D.
<i>Obstetrician-in-Chief</i> .....	LOUIS H. DOUGLASS, M.D.
<i>Pediatrician-in-Chief</i> .....	T. CAMPBELL GOODWIN, A.B., M.D.
<i>Pathologist-in-Chief</i> .....	FRANK B. KINDELL, A.B., M.D.
<i>Dental Surgeon-in-Chief</i> .....	LOWELL P. HENNEBERGER, D.D.S.
<i>Assistant Surgeon-in-Chief</i> .....	THOMAS B. AYCOCK, B.S., M.D.
<i>Visiting Surgeon</i> .....	C. A. REIFSCHNEIDER, M.D.
	{ I. RIDGEWAY TRIMBLE, M.D.
	{ LUTHER E. LITTLE, M.D.
<i>Assistant Visiting Surgeons</i> .....	{ SAMUEL McLANAHAN, JR., M.D.
	{ JAMES C. OWINGS, M.D.
	{ HARRY C. HULL, M.D.
	{ GEORGE H. YEAGER, B.S., M.D.
<i>Assistant Visiting Physician in Tuberculosis</i> .....	LAWRENCE M. SERRA, M.D.
<i>Assistant Visiting Psychiatrist</i> .....	THOMAS A. C. RENNIE, M.D.
<i>Visiting Obstetrician</i> .....	J. G. MORRIS REESE, M.D.
	{ KENNETH B. BOYD, M.D.
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	{ MARIUS P. JOHNSON, A.B., M.D.
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	{ WILLIAM M. SEABOLD, A.B., M.D.
<i>Visiting Gynecologists</i> .....	{ J. MASON HUNDLEY, JR., M.A., M.D.
	{ R. GERARD WILLSE, M.D.
<i>Assistant Visiting Gynecologists</i> .....	{ JOHN T. HIBBITTS, M.D.
	{ JOHN C. DUMLER, B.S., M.D.
<i>Visiting Physician</i> .....	PAUL W. CLOUGH, B.S., M.D.
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	{ RAYMOND G. HUSSEY, M.A., M.D.
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<i>Visiting Orthopedic Surgeon</i> .....	ALLEN F. VOSHELL, A.B., M.D.
<i>Assisting Visiting Orthopedic Surgeons</i> .....	{ H. ALVAN JONES, M.D.
	{ HENRY F. ULLRICH, M.D., Sc. D.
<i>Visiting Laryngologist</i> .....	EDWARD A. LOOPER, M.D., D.Oph.
<i>Assistant Visiting Laryngologists</i> .....	{ FRANKLIN B. ANDERSON, M.D.
	{ THOMAS R. O'ROURK, M.D.
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<i>Assistant Visiting Urologist</i> .....	HUGH JEWETT, M.D.
<i>Chief Radiologist</i> .....	JOHN W. PIERSON, M.D.
<i>Visiting Neurological Surgeon</i> .....	CHARLES BAGLEY, JR., M.A., M.D.

<i>Assistant Visiting Neurological Surgeon</i> .....	RICHARD G. COBLENTZ, M.A., M.D.
<i>Assistant Visiting Neurologists</i> .....	{ FRANK FORD, M.D. O. R. LANGWORTHY, M.D. LAWRENCE C. KOLB, M.D.
<i>Visiting Proctologist</i> .....	MONTE EDWARDS, M.D.
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<i>Visiting Dermatologist</i> .....	ISAAC R. PELS, M.D.
<i>Visiting Dental Surgeon</i> .....	H. GLENN WARING, D.D.S.
<i>Assistant Visiting Dental Surgeons</i> .....	{ IRVIN B. GOLBORO, D.D.S. LAWRENCE W. BIMESTEFER, D.D.S. JOSEPH B. BERKE, D.D.S.

THE JAMES LAWRENCE KERNAN HOSPITAL AND INDUSTRIAL SCHOOL OF  
MARYLAND FOR CRIPPLED CHILDREN

This institution is situated on an estate of 75 acres at Dickeyville. The site is just within the northwestern city limits and of easy access from the city proper.

The location is ideal for the treatment of children, in that it affords all the advantages of sunshine and country air.

A complete hospital unit, new in every respect, offers all modern facilities for the care of any orthopaedic condition in children.

The hospital is equipped with 82 beds—endowed, and city and state supported.

The Orthopaedic Dispensary at the University Hospital is maintained in closest affiliation and cares for the cases discharged from the Kernan Hospital. The Physical Therapy Department is very well equipped with modern apparatus and trained personnel. Occupational therapy has been fully established and developed under trained technicians.

STAFF

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<i>Attending Orthopaedic Surgeon</i> .....	ALBERTUS COTTON, A.M., M.D.
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<i>Resident Orthopaedic Surgeon</i> .....	C. J. FRANKEL, M.D.
<i>Consulting Surgeons</i> {	J. M. T. FINNEY, A.B., M.D., D.S.M., F.R.C.S., (Eng., Ire.) Hon. ARTHUR M. SHIPLEY, M.D., Sc.D.
<i>Consulting Plastic Surgeons</i> .....	{ JOHN STAIGE DAVIS, B.Sc., M.D. EDWARD H. KITLOWSKI, M.D.
<i>Consulting Neurological Surgeon</i> .....	CHARLES BAGLEY, JR., M.A., M.D.
<i>Consulting Oculist</i> .....	HARRY FRIEDENWALD, A.B., M.D., D.H.L., D.Sc.
<i>Oculist</i> .....	F. A. PACIENZA, M.D.
<i>Consulting Aurist and Laryngologist</i> .....	EDWARD A. LOOPER, M.D., D.Oph.
<i>Aurist and Laryngologist</i> .....	FRANKLIN B. ANDERSON, M.D.
<i>Consulting Dentist</i> .....	HARRY B. MCCARTHY, D.D.S.



<i>Dentist</i> .....	M. E. COBERTH, D.D.S.
<i>Consulting Physicians</i> .....	{ THOMAS R. BROWN, A.B., M.D.
	{ LEWELLYS F. BARKER, A.B., M.D.
<i>Pediatrist</i> .....	BENJAMIN TAPPAN, A.B., M.D.
<i>Dermatologists</i> .....	{ HARRY M. ROBINSON, M.D.
	{ LEON GINSBERG, M.D.
<i>Consulting Pathologists</i> .....	{ SYDNEY M. CONE, A.B., M.D.
	{ HUGH R. SPENCER, M.D.
<i>Consulting Neurologist</i> .....	IRVING J. SPEAR, M.D.
<i>Neurologist</i> .....	R. V. SELIGER, M.D.
<i>Anaesthetist</i> .....	MISS MARIE BAREFORD, R.N.
<i>Roentgenologist</i> .....	ALBERTUS COTTON, A.M., M.D.
<i>Acting Superintendent</i> .....	MISS MAUDE M. GARDNER, R.N.
<i>Dispensary and Social Service Nurse</i> .....	MISS MABEL S. BROWN, R.N.
	{ MISS JANE EWING, P. T., Reg.
<i>Technicians: Physical Therapy and X-Ray</i> .....	{ MRS. GEORGIANA WISON
	{ MISS JANE ANDERSON
<i>Occupational Therapist</i> .....	MISS ALICE M. CLEMENT, O. T., Reg.
<i>Instructor in Grammar School</i> .....	MISS LAURA HAMPSON

### LIBRARIES

The University Library, founded in 1813 by the purchase of the collection of Dr. John Crawford, now contains 18,500 volumes, a file of 225 current medical journals, and several thousand pamphlets and reprints. It is well stocked with recent literature, including books and periodicals of general interest. The home of the library is Davidge Hall, a comfortable and commodious building in close proximity to the classrooms and the laboratories of the Medical Department. The library is open daily during the year for use of members of the faculty, the students, and the profession generally.

The Library of the Medical and Chirurgical Faculty of Maryland, containing 50,000 volumes, is open to the students of the school. The leading medical publications of the world are received by the library, and complete sets of many journals are available. Other libraries of Baltimore are the Peabody (275,000 volumes) and the Enoch Pratt Free Library (426,047 volumes).

All these libraries are open to the students of the school without charge.

### ORGANIZATION OF THE CURRICULUM

The following curriculum is the result of a thorough revision of teaching in this school in order to meet modern requirements. The multiplication of specialties in medicine and surgery necessitates a very crowded course and the introduction of electives will very soon be depended on to solve some of the difficulties.

The curriculum is organized under eleven departments.

1. Anatomy (including Histology and Embryology).
2. Physiology.
3. Bacteriology and Immunology.
4. Biological Chemistry.
5. Pharmacology and Materia Medica.
6. Pathology.
7. Medicine (including Medical Specialties).
8. Surgery (including Surgical Specialties).
9. Obstetrics.
10. Gynecology.
11. Ophthalmology.

The instruction is given in four years of graded work.

Several courses of study extend through two years or more, but in no case are the students of different years thrown together in the same course of teaching.

The first and second years are devoted largely to the study of the structures and functions of the normal body. Laboratory work occupies most of the student's time during these two years.

Some introductory instruction in Medicine and Surgery is given in the second year. The third and fourth years are almost entirely clinical.

A special feature of instruction in the school is the attempt to bring together teacher and student in close personal relationship. In many courses of instruction the classes are divided into small groups and a large number of instructors insures attention to the needs of each student.

In most courses the final examination as the sole test of proficiency has disappeared and the student's final grade is determined largely by partial examinations, recitations and assigned work carried on throughout the course.

## DEPARTMENT OF GROSS ANATOMY

EDUARD UHLENHUTH, Ph.D. ....	Professor of Anatomy
FRANK H. FIGGE, Ph.D. ....	Associate Professor of Gross Anatomy
JAMES C. LIPSETT, B.S. ....	Assistant Professor of Gross Anatomy
ARTHUR G. SIWINSKI, A.B., M.D. ....	Instructor in Gross Anatomy
EUGENE E. COVINGTON, M.D. ....	Instructor in Gross Anatomy
RAYMOND K. THOMPSON, B.S. ....	Weaver Fellow in Gross Anatomy

*Course 101 f.* Freshman Gross Anatomy. Total number of hours 350. Four hours lectures and conferences and eighteen hours laboratory (dissection of the human subject) during the first semester. E. Uhlenhuth, Frank H. Figge and James C. Lipsett.

*Course 201 f.* Advanced Anatomy (elective course). Total number of hours 64. Selected problems in gross anatomy. This course is intended primarily to offer to the sophomore student an opportunity of extending the knowledge secured in the freshman course. E. Uhlenhuth, Frank H. Figge and James C. Lipsett.

In addition to the above courses, facilities for special anatomical problems are offered to the more advanced student and physician.

## DEPARTMENT OF HISTOLOGY AND EMBRYOLOGY

CARL L. DAVIS, M.D.	Professor of Anatomy
O. G. HARNE	Associate Professor of Histology
JOHN F. LUTZ, A.B., M.D.	Assistant Professor of Histology
JOSEPH POKORNY, M.D.	Instructor in Histology
MARTIN J. HANNA, M.D.	Instructor in Histology
WILLIAM M. SEABOLD, A.B., M.D.	Instructor in Neuro-anatomy

*First Year—150 hours.* The course in histology is divided equally between the study of the fundamental tissues and that of organs. Throughout the entire course the embryology of the part being studied precedes the study of the fully developed tissue. Thus embryology becomes a correlated part of the whole subject of microscopic anatomy and not an independent subject.

Each student is furnished a set of histological slides, previously prepared in our own laboratory, thus insuring a uniform and satisfactory quality of material for study and permitting the time of the student to be expended in the study of material rather than in the technic of its preparation. The object of the course is to present the evidence of function as shown by the structure of tissues and organs. Dr. Davis, Dr. Lutz and Professor Harne.

An optional laboratory course is offered. This supplements the required course giving laboratory experience which can not be incorporated in the former. No added charge is made for the course.

## NEURO-ANATOMY

*First Year—100 hours.* Neuro-anatomy embraces a study of the fundamental structure of the central nervous system as applied to its function. An abundance of material permits of individual dissection of the human brain. A series of appropriately stained sections of the human brain stem is furnished each student for the microscopic study of the internal structure of the nervous system. Dr. Davis, Dr. Lutz and Dr. Seabold.

For a description of the graduate courses offered by the members of the staff, consult the catalog of the Graduate School.

## DEPARTMENT OF PHYSIOLOGY

WILLIAM R. AMBERSON, Ph.D. ....	Professor of Physiology
D. CONRAD SMITH, Ph.D. ....	Associate Professor of Physiology
ROBERT H. OSTER, Ph.D. ....	Assistant Professor of Physiology
EDWIN P. HIATT, M.A. ....	Instructor in Physiology
J. VICTOR MONKE, M.S. ....	Weaver Fellow in Physiology

Four lectures, two conferences and two laboratory periods a week. September to January inclusive. The fundamental concepts of physiology are presented with special reference to mammalian problems. Total number of hours 240.

## DEPARTMENT OF BACTERIOLOGY AND IMMUNOLOGY

FRANK W. HACHEL, M.D. ....	Professor of Bacteriology
JAMES G. McALPINE, Ph.D. ....	Associate Professor of Bacteriology
J. A. F. PFEIFFER, Ph.D., M.D. ....	Instructor in Bacteriology
HENRY F. BUETTNER, M.D. ....	Instructor in Bacteriology
H. EDMUND LEVIN, B.S., M.D. ....	Instructor in Bacteriology

Instruction in bacteriology is given in the laboratory to the students of of the second year during the first semester. This includes the methods of preparation and sterilization of culture media, the study of pathogenic bacteria, and the bacteriological examination of water and milk. The bacteriological diagnosis of the communicable diseases is also included in this course. Animal inoculations are made in connection with the bacteria studied. The principles of general bacteriology are taught by quiz, conference and lecture.

The principles of immunology are presented by means of quizzes, conferences and lectures to the second-year class throughout the second semester, and practical experiments are carried out by the class in laboratory sessions.

Total number of hours: Bacteriology 120.

Immunology 72.

## DEPARTMENT OF BIOLOGICAL CHEMISTRY

H. BOYD WYLIE, M.D. ....	Professor of Biological Chemistry
EMIL G. SCHMIDT, Ph.D., LL.B. ....	Associate Professor of Biological Chemistry
FRANK N. OGDEN, M.D. ....	Associate in Biological Chemistry
DOROTHY E. SCHMALZER, B.S. ....	Assistant in Biological Chemistry

This course is designed to present the fundamental principles of biological chemistry and to indicate their applications to the clinical aspects of medicine. The phenomena of living matter and its chief ingredients, secretions and excretions are discussed in lectures and conferences and examined

experimentally. Training is given in routine biochemical methods of investigation. Total number of hours 212.

*Graduate Courses.* Consult the catalogue of the Graduate School for descriptions of the graduate courses offered by members of the staff.

## DEPARTMENT OF PHARMACOLOGY

JOHN C. KRANTZ, JR., Ph.D.	Professor of Pharmacology
C. JELLEFF CARR, Ph.D.	Assistant Professor of Pharmacology
WILLIAM ELLSWORTH EVANS, Ph.D.	Assistant Professor of Pharmacology
RUTH MUSSER, A.B., M.S.	Instructor in Pharmacology
MARIUS P. JOHNSON, A.B., M.D.	Assistant in Pharmacology
WILLIAM G. HARNE	Demonstrator in Pharmacology
FREDERICK K. BELL, Ph.D.	U. S. Pharmacopoeia Fellow
FRANCES F. BECK, A.B., M.S.	International Cancer Foundation Assistant
SYLVAN FORMAN, M.S.	Isaac E. Emerson Fellow in Pharmacology
FRED W. ELLIS, M.S.	Isaac E. Emerson Fellow in Pharmacology

This course is designed to include those phases of pharmacology necessary for an intelligent use of drugs in the treatment of disease. The didactic instruction includes materia medica, pharmacy, prescription-writing, toxicology, posology, pharmacodynamics, and experimental therapeutics. The laboratory exercises parallel the course of lectures.

In addition, optional conference periods and lectures are available for students desiring further instruction or advice.

Total number of hours 176.

For a description of the graduate courses offered by the members of the staff, consult the catalog of the Graduate School.

## DEPARTMENT OF PATHOLOGY

HUGH R. SPENCER, M.D.	Professor of Pathology
ROBERT B. WRIGHT, B.S., M.D.	Assistant Professor of Pathology
C. GARDNER WARNER, A.B., M.D.	Assistant Professor of Pathology
WALTER C. MERKEL, A.B., M.D.	Assistant Professor of Pathology
ALBERT E. GOLDSTEIN, M.D.	Associate in Pathology
FRANK B. KINDELL, A.B., M.D.	Associate in Pathology
WM. S. LOVE, JR., A.B., M.D.	Instructor in Pathology
LEON FREEDOM, M.D.	Instructor in Pathology
BENJAMIN ABESHOUSE, Ph.B., M.D.	Instructor in Pathology
WILLIAM R. GERAGHTY, B.S., M.D.	Instructor in Pathology
MILTON S. SACKS, B.S., M.D.	Instructor in Pathology
.....	Instructor in Pathology
WM. R. JOHNSON, M.D.	Instructor in Pathology
JAMES G. ARNOLD, JR., A.B., M.D.	Assistant in Pathology
CONRAD B. ACTON, B.S., M.D.	Assistant in Pathology
JOHN E. SAVAGE, B.S., M.D.	Assistant in Pathology
HARRY C. HULL, M.D.	Assistant in Pathology
WILLIAM M. SEABOLD, A.B., M.D.	Assistant in Pathology
THOMAS A. NESTOR, Ph.B., M.D.	Assistant in Pathology
RAYMOND J. WYRENS, A.B., M.D.	Weaver Fellow in Pathology

APPLIED PATHOLOGY. INCLUDING GROSS MORBID ANATOMY AND MORBID PHYSIOLOGY. (*Third Year.*) In this course the special relation of lesions to clinical symptoms and signs is emphasized.

In the laboratory the class is divided into groups for the study of classified autopsy material.

AUTOPSIES. (*Third Year.*) Small groups of students attend autopsies at the morgues of the University Hospital and Baltimore City Hospitals. They are required to assist at autopsies and to prepare protocols.

CLINICAL PATHOLOGICAL CONFERENCE. (*Fourth Year.*) In collaboration with the Department of Medicine, material from autopsies is studied with reference to the correlation of the clinical aspects with the pathological findings.

ADVANCED WORK IN PATHOLOGY. Properly qualified students will be permitted to carry out advanced or research work along the lines of experimental pathology.

Second Year—Total number of hours . . . . .	168
Third Year—Total number of hours . . . . .	160
Fourth Year—Clinical Pathological Conference . . . . .	30

## DEPARTMENT OF MEDICINE

MAURICE C. PINCOFFS, B.S., M.D. . . . .	Professor of Medicine
JOS. E. GICHNER, M.D. . . . .	Professor of Clinical Medicine and Physical Therapeutics
G. CARROLL LOCKARD, M.D. . . . .	Professor of Clinical Medicine
HARVEY G. BECK, M.D., Sc.D. . . . .	Professor of Clinical Medicine
HARRY M. STEIN, M.D. . . . .	Professor of Clinical Medicine
PAUL W. CLOUGH, B.S., M.D. . . . .	Associate Professor of Medicine
SYDNEY R. MILLER, B.S., M.D. . . . .	Associate Professor of Medicine
WALTER A. BAETJER, A.B., M.D. . . . .	Associate Professor of Medicine
THOMAS R. SPRUNT, A.B., M.D. . . . .	Associate Professor of Medicine
WM. S. LOVE, JR., A.B., M.D. . . . .	Associate Professor of Medicine
RAYMOND HUSSEY, M.A., M.D. . . . .	Associate Professor of Medicine
L. A. M. KRAUSE, M.D. . . . .	Associate Professor of Medicine
WILLIAM H. SMITH, M.D. . . . .	Associate Professor of Clinical Medicine
H. J. MALDEIS, M.D. . . . .	Associate Professor of Medical Jurisprudence
GEORGE MCLEAN, M.D. . . . .	Assistant Professor of Medicine
H. R. PETERS, A.B., M.D. . . . .	Assistant Professor of Medicine
JOHN E. LEGGE, M.D. . . . .	Assistant Professor of Medicine
THOMAS C. WOLFF, LITT. B., M.D., C.M. . . . .	Assistant Professor of Medicine
H. M. BUBERT, M.D. . . . .	Assistant Professor of Medicine
T. NELSON CAREY, M.D. . . . .	Assistant Professor of Medicine
J. S. EASTLAND, A.B., M.D. . . . .	Associate in Medicine
WETHERBEE FORT, M.D. . . . .	Associate in Medicine
FRANK J. GERAGHTY, A.B., M.D. . . . .	Associate in Medicine
L. P. GUNDRY, A.B., M.D. . . . .	Associate in Medicine
E. H. TONOLLA, M.D. . . . .	Associate in Medicine

JOHN H. MILLS, M.D.	Associate in Medicine
SAMUEL T. HELMS, B.S., M.D.	Instructor in Medicine
EARL L. CHAMBERS, M.D.	Instructor in Medicine
DAVID TENNER, M.D.	Instructor in Medicine
R. B. MITCHELL, JR., B.S., M.D.	Instructor in Medicine
SAMUEL LEGUM, A.B., M.D.	Instructor in Medicine
HARRY V. LANGELOTTIG, A.B., M.D.	Instructor in Medicine
ROBERT W. GARIS, A.B., M.D.	Instructor in Medicine
M. S. SHILING, A.B., M.D., Sc.D.	Instructor in Medicine
SOL SMITH, A.B., M.D.	Instructor in Medicine
H. EDMUND LEVIN, B.S., M.D.	Instructor in Medicine
ROBERT A. REITER, A.B., M.D.	Instructor in Medicine
W. GRAFTON HERSPERGER, A.B., M.D.	Instructor in Medicine
MEYER W. JACOBSON, M.D.	Instructor in Medicine
CONRAD ACTON, B.S., M.D.	Instructor in Medicine
HUGH G. WHITEHEAD, M.D.	Instructor in Medicine
W. H. TRIPLETT, M.D.	Assistant in Medicine
MORRIS FINE, M.D.	Assistant in Medicine
PHILIP D. FLYNN, M.D.	Assistant in Medicine
WILLIAM H. GRENZER, M.D.	Assistant in Medicine
GEORGE SILVERTON, A.B., M.D.	Assistant in Medicine
LAWRENCE KATZENSTEIN, M.D.	Assistant in Medicine
LEON ASHMAN, M.D.	Assistant in Medicine
HARRY M. ROBINSON, JR., B.S., M.D.	Assistant in Medicine
NATHANIEL BECK, M.D.	Assistant in Medicine
JOSEPH M. BLUMBERG, B.S., M.D.	Assistant in Medicine
JOHN A. MYERS, B.E.E., M.E.E., M.D.	Assistant in Medicine
JOHN ATKINS, M.D.	Assistant in Medicine
FRANCIS GEORGE DICKEY, A.B., M.D.	Assistant in Medicine

#### Lecturers

E. B. FREEMAN, B.S., M.D.	Lecturer in Medicine
CHARLES R. GOLDSBOROUGH, M.A., M.D.	Lecturer in Medicine

### GENERAL OUTLINE

#### SECOND YEAR

Introduction to clinical medicine.

- (a) Introductory physical diagnosis.  
(1 hour a week, first semester; 2 hours a week, second semester.)
- (b) Medical clinics.  
(1 hour a week, second semester.)

#### THIRD YEAR

I. The methods of examination (13 hours a week).

- (a) History taking.
- (b) Physical diagnosis.
- (c) Clinical pathology.

These subjects are taught and practiced in the hospital out-patient department and in the clinical laboratory.

- II. The principles of medicine (200 hours).
  - (a) Lectures, clinics and demonstrations in general medicine, neurology, pediatrics, psychiatry and preventive medicine.
- III. The principles of therapeutics (15 hours).
  - Lectures and demonstrations.

#### FOURTH YEAR

The practice of medicine.

- I. Clinical clerkship on the medical wards.
  - (26 hours a week for ten weeks.)
  - (a) Responsibility, under supervision, for the history, physical examination, laboratory examinations and progress notes of assigned cases.
  - (b) Ward classes in general medicine, the medical specialties, and therapeutics.
- II. Clinics in general medicine and the medical specialties.
  - (6 hours a week.)
- III. Dispensary work in the medical specialties.
- IV. Clinical pathological conferences (1 hour a week).

#### MEDICAL DISPENSARY WORK

The medical dispensaries of both the Mercy and the University Hospitals are utilized for teaching in the third year. Each student spends two hours daily for ten weeks in dispensary work. The work is done in groups of four to six students under an instructor. Systematic history-taking is especially stressed. Physical findings are demonstrated. The student becomes familiar with the commoner acute and chronic disease processes.

#### PHYSICAL DIAGNOSIS

*Second Year.* Didactic lectures and practical demonstrations in topographical anatomy and normal physical signs.

*Third Year.* The class is divided into small groups, and each section receives instruction for two hours daily for ten weeks. This course is given at the City Hospitals. The large clinical material there is utilized to give each student the opportunity to familiarize himself with the common types of bodily structure, with the normal variations in physical signs and with the physical signs of the chief pulmonary, circulatory and abdominal diseases.

A course of lectures (1 hour a week) on physical diagnosis supplements the practical work in this subject.

#### THERAPEUTICS

*Third Year.* General therapeutics and materia medica are taken up and an effort is made to familiarize the student with the practical treatment of disease. The special therapy of the chief diseases is then reviewed. One hour a week. Dr. Lockard.



*Fourth Year.* Special consideration is given to the practical application of therapeutic principles in bedside teaching and the chief therapeutic methods are demonstrated.

Students attend therapeutic ward rounds once a week throughout their medical trimester.

### TUBERCULOSIS

During the third year in connection with the instruction in physical diagnosis a practical course is given at the Municipal Tuberculosis Hospital. Stress is laid upon the recognition of the physical signs of the disease, as well as upon its symptomatology and gross pathology.

### CARDIOLOGY

During the fourth year an elective course in cardiology is offered at the Mercy Hospital. The course occupies one and one-half hours weekly. Physical diagnosis, electrocardiography and the therapeutic management of cardiac cases are stressed.

### SYPHILIS

*Third Year.* During the third year the subject of syphilis is dealt with in the lecture course.

*Fourth Year.* An elective course in the therapeutic management of syphilis is offered in the dispensary.

### CLINICAL PATHOLOGY

RAYMOND HUSSEY, M.A., M.D.

Associate Professor of Medicine and Head of Department of Clinical Pathology

H. J. MALDEIS, M.D. . . . . Associate Professor of Medical Jurisprudence

JOHN H. MILLS, M.D. . . . . Associate in Medicine

SAMUEL T. HELMS, B.S., M.D. . . . . Instructor in Medicine

E. M. REESE, M.S. . . . . Assistant in Medicine

HUGH G. WHITEHEAD, M.D. . . . . Assistant in Medicine

JOSEPH M. BLUMBERG, B.S., M.D. . . . . Assistant in Medicine

JOHN A. MYERS, B.E.E., M.E.E., M.D. . . . . Assistant in Medicine

During the third year the student is thoroughly drilled in the technic of the usual clinical laboratory work, so that he is able to perform all routine examinations which may be called for during his fourth year, in connection with the work in the wards and dispensary.

The practical work is supplemented by a series of didactic lectures and demonstrations in which the entire teaching staff of the department takes an active part. The microscopical and chemical study of blood, exudates and transudates, gastric juice, spinal fluid, feces and urine are successively taken up, and special attention directed to the clinical significance of the findings.

Clinical parasitology from the standpoint of the infecting agent and the carrier is given careful consideration.

The entire course is thoroughly practical. Each student has his own microscope and is provided with blood counters and hemoglobinometer for his exclusive use, and every two students are equipped with a special laboratory outfit for all routine purposes.

During the fourth year the student applies what he has learned during the preceding year in the laboratories of the various affiliated hospitals. He is also supplied with a laboratory outfit which is sufficiently complete to enable him to work independently of the general equipment. Special instructors are available during certain hours to give necessary assistance and advice.

### GASTRO-ENTEROLOGY

T. FREDERICK LEITZ, M.D.....	Clinical Professor of Gastro-Enterology
THEODORE H. MORRISON, M.D.....	Clinical Professor of Gastro-Enterology
MAURICE FELDMAN, M.D.....	Assistant Professor of Gastro-Enterology
ZACHARIAH MORGAN, M.D.....	Assistant Professor of Gastro-Enterology
SAMUEL MORRISON, A.B., M.D.....	Assistant Professor of Gastro-Enterology
JOSEPH SINDLER, M.D.....	Associate in Gastro-Enterology
Z. VANCE HOOPER, M.D.....	Associate in Gastro-Enterology
M. S. KOPPELMAN, M.D.....	Instructor in Gastro-Enterology
ERNEST LEVI, M.D.....	Instructor in Gastro-Enterology
ALBERT J. SHOCHAT, B.S., M.D.....	Assistant in Gastro-Enterology

*Third Year.* A series of six lectures is given on the diseases of the digestive tract.

*Fourth Year.* Clinics and demonstrations to the class for one hour a week. Dispensary instruction to small groups throughout the entire session. Practical instruction is given in the use of modern methods of study of the diseases of the gastro-intestinal tract.

### PSYCHIATRY

ROSS MCC. CHAPMAN, M.D.....	Professor of Psychiatry
RALPH P. TRUITT, M.D.....	Associate Professor of Psychiatry
LAWRENCE F. WOOLLEY, M.D.....	Associate Professor of Psychiatry
HARRY GOLDSMITH, M.D.....	Assistant Professor of Psychiatry
H. W. NEWELL, M.D.....	Assistant Professor of Psychiatry
HARRY M. MURDOCK, B.S., M.D.....	Assistant Professor of Psychiatry

*First Year.* The student attends six lectures dealing with the development and function of the normal personality.

*Second Year.* The student attends fourteen lectures dealing with psychopathology.

*Third Year.* Psychopathology continued, six lectures; reaction types, twelve hours, lectures and demonstrations; the psychoses, six hours, lectures and demonstrations; history-taking and actual study of cases, out-patient clinic, thirty hours.

*Fourth Year.* The neuroses, psychoneuroses, psychoses, lectures and demonstrations, ten hours. In this year the class is divided into sections for clinical conferences on selected cases.

### PEDIATRICS

C. LORING JOSLIN, M.D.....	Professor of Pediatrics
EDGAR B. FRIEDENWALD, M.D.....	Professor of Clinical Pediatrics
T. CAMPBELL GOODWIN, M.S., M.D.....	Associate Professor of Pediatrics
JOHN H. TRABAND, M.D.....	Assistant Professor of Pediatrics
ALBERT JAFFE, M.D.....	Assistant Professor of Pediatrics
A. H. FINKELSTEIN, M.D.....	Assistant Professor of Pediatrics
FREDERICK B. SMITH, M.D.....	Assistant Professor of Pediatrics
WILLIAM J. TODD, M.D.....	Associate in Pediatrics
CLEWELL HOWELL, B.S., M.D.....	Associate in Pediatrics
SAMUEL S. GLICK, A.B., M.D.....	Associate in Pediatrics
F. STRATNER OREM, M.D.....	Associate in Pediatrics
J. EDMUND BRADLEY, M.D.....	Associate in Pediatrics
M. PAUL BYERLY, M.D.....	Instructor in Pediatrics
G. BOWERS MANSDORFER, B.S., M.D.....	Instructor in Pediatrics
WILLIAM M. SEABOLD, A.B., M.D.....	Instructor in Pediatrics
THOMAS J. COONAN, A.B., M.D.....	Instructor in Pediatrics
W. J. SCHMITZ, M.D.....	Assistant in Pediatrics
ISRAEL P. MERANSKI, B.S., M.D.....	Assistant in Pediatrics
H. WHITNEY WHEATON, M.D.....	Assistant in Pediatrics
LAURISTON L. KEOWN, A.B., M.D.....	Assistant in Pediatrics
THOMAS A. CHRISTENSEN, B.S., M.D.....	Assistant in Pediatrics
JEROME FINEMAN, M.D.....	Assistant in Pediatrics
ABRAHAM HURWITZ, M.D.....	Assistant in Pediatrics

*Third Year.* A. Lectures on infant feeding and the fundamentals of diseases of infants and children. (15 hours.)

B. Lectures on contagious diseases in conjunction with the Department of Hygiene and Preventive Medicine. (14 hours.)

C. A special course in physical diagnosis is given at City Hospitals. (20 hours.)

D. Clinical conferences demonstrating diseases of the newly-born. (6 hours.)

*Fourth Year.* A. Amphitheatre Clinic at which patients are shown to demonstrate the chief features of diseases discussed. (30 hours.)

B. Conferences and demonstrations are given in problems concerning diagnosis, care, treatment and clinical pathology of diseases of infants and children; also in the preparation of theses on assigned pediatric subjects. (30 hours.)

C. Clinical clerkship on the pediatric wards. This includes experience in the taking of histories, making physical examinations and doing routine laboratory work, and in following up of the patient's progress, all under the supervision of members of the visiting staff of the Department of Pediatrics. (140 hours.)

D. Instruction in the pediatric clinic of the out-patient department of the University Hospital. This consists of  $1\frac{1}{2}$  hours daily for five weeks—30 minutes each day being devoted to clinical demonstration of some interesting case by a member of the staff; one hour daily to the taking of histories and the making of a physical examination under supervision of one of the staff instructors. (45 hours.)

Total hours devoted to the teaching of pediatrics: 300.

## NEUROLOGY

IRVING J. SPEAR, M.D. ....	Professor of Neurology
ANDREW C. GILLIS, A.M., M.D., LL.D. ....	Professor of Neurology
G. M. SETTLE, A.B., M.D. ....	Associate Professor of Neurology and Clinical Medicine
MILFORD LEVY, M.D. ....	Associate Professor of Neurology
LEON FREEDOM, M.D. ....	Associate Professor of Neurology
BENJAMIN PUSHKIN, M.D. ....	Assistant Professor of Neurology
JAMES G. ARNOLD, JR., A.B., M.D. ....	Associate in Neurology
PHILIP F. LERNER, A.B., M.D. ....	Instructor in Neurology
CHARLES E. BALFOUR, M.D. ....	Assistant in Neurology
BERNHARD BADT, M.D. ....	Assistant in Neurology
WILLIAM L. FEARING, M.D. ....	Assistant in Neurology

*Second Year.* Fifteen lectures correlating the anatomy and physiology of the nervous system with clinical neurology.

*Third Year.* Ten lecture-demonstrations are given in which the major types of diseases of the nervous system are presented. A short course is also given at the Baltimore City Hospitals, consisting of six periods of two hours each, in which the students in small groups carry out complete neurologic examinations of selected cases which illustrate the chief neurologic syndromes.

*Fourth Year.* Clinical conference one hour each week to the entire class. This subject is taught at the University and Mercy Hospitals. All patients presented at these clinics are carefully examined; complete written records are made by the students who demonstrate the patients before the class. The patients are usually assigned one or two weeks before they are presented, and each student in the class must prepare one or more cases during the year.

*Ward Class Instruction.* In small sections at the University and Mercy Hospitals. In these classes the students come in close personal contact with the patients in the wards under the supervision of the instructor.

*Dispensary Instruction.* Small sections are instructed in the dispensaries

of the University and Mercy Hospitals four afternoons each week. In this way students are brought into contact with nervous diseases in their early and late manifestations.

### HYGIENE AND PREVENTIVE MEDICINE

HUNTINGTON WILLIAMS, M.D., Dr.P.H. . . . . Professor of Hygiene and Public Health  
 WILLIAM H. F. WARTHEN, A.B., M.D. . . . . Associate in Hygiene and Public Health  
 MYRON G. TULL, A.B., M.D. . . . . Instructor in Hygiene and Public Health

*Third Year.* One hour lecture to the whole class each Monday from September to May. Basic instruction is given in the clinical and public health aspects of the communicable diseases. The lectures are under the auspices of the Department of Medicine and are given by staff members in that department, including physicians representing Pediatrics, and Hygiene and Preventive Medicine.

*Fourth Year.* Two hour instruction periods for the entire class, in groups of ten to fifteen students on six Wednesday afternoons. These sessions enable the students themselves to prepare birth and death certificates, to vaccinate against smallpox and to conduct other practical public health procedures. In addition there are four Wednesday afternoon field inspection trips for each third of the class. These trips, under guidance of full time public health workers, include visits to (1) city water filtration plant, (2) rural dairy farm, (3) milk pasteurization plant, ice cream plant and bakery and (4) industrial plant which has an active program of hygiene. Elective case work in association with the Western Health District.

The course deals with the fundamentals of public health and supplements the work in the third year. The major emphasis in both years is on the practice of preventive medicine and the relation of prevention to diagnosis and treatment. The entire class, in small groups, receives practical instruction at Sydenham Hospital, the one-hundred bed communicable disease hospital of the Baltimore City Health Department.

### MEDICAL JURISPRUDENCE

H. J. MALDEIS, M.D. . . . . Associate Professor of Medical Jurisprudence  
 Baltimore City Post Mortem Physician

*Third Year.* One hour each week for three weeks.

This course embraces a summary of some of the following: Proceedings in criminal and civil prosecution, medical evidence and testimony, identity and its general relations, sexual abnormalities, personal identity, impotence and sterility, rape, criminal abortions, signs of death, wounds in their medico-legal relations, death—natural and homicidal, malpractice, insanity, and medico-legal autopsies.

## DEPARTMENT OF SURGERY

ARTHUR M. SHIPLEY, M.D., Sc.D.	Professor of Surgery
WALTER D. WISE, M.D.	Professor of Surgery
PAGE EDMUNDS, M.D.	Professor of Traumatic Surgery
FRANK S. LYNN, M.D.	Professor of Clinical Surgery
ELLIOTT H. HUTCHINS, M.A., M.D.	Professor of Clinical Surgery
CHARLES REID EDWARDS, M.D.	Professor of Clinical Surgery
CHARLES BAGLEY, JR., M.A., M.D.	Professor of Neurological Surgery
F. L. JENNINGS, M.D.	Professor of Clinical Surgery
ROBERT P. BAY, M.D.	Professor of Oral Surgery
THOMAS R. CHAMBERS, A.B., M.D.	Associate Professor of Surgery
R. W. LOCHER, M.D.	Associate Professor of Clinical Surgery
A. M. EVANS, M.D.	Associate Professor of Surgery
EDWARD S. JOHNSON, M.D.	Associate Professor of Surgery
D. J. PESSAGNO, A.B., M.D.	Associate Professor of Surgery
CHARLES A. REIFSCHNEIDER, M.D.	Associate Professor of Traumatic Surgery
MONTE EDWARDS, M.D.	Associate Professor of Surgery
N. CLYDE MARVEL, A.B., M.D.	Associate Professor of Surgery
THOMAS B. AYCOCK, B.S., M.D.	Associate Professor of Surgery
RICHARD G. COBLENTZ, M.A., M.D.	Associate Professor of Neurological Surgery
GRANT E. WARD, A.B., M.D.	Associate Professor of Surgery
I. O. RIDGLEY, M.S., M.D.	Associate in Surgery
H. F. BONGARDT, M.D.	Associate in Surgery
W. W. WALKER, B.S., M.D.	Associate in Surgery
C. W. PEAKE, M.D.	Associate in Surgery
GEORGE H. YEAGER, B.S., M.D.	Associate in Surgery
W. R. JOHNSON, M.D.	Instructor in Surgery
E. M. HANRAHAN, A.B., M.D.	Instructor in Surgery
S. DEMARCO, M.D.	Instructor in Surgery
KARL J. STEINMUELLER, A.B., M.D.	Instructor in Surgery
LUTHER E. LITTLE, M.D.	Instructor in Surgery
J. FRANK HEWITT, A.B., M.D.	Instructor in Surgery
J. G. ONNEN, M.D.	Instructor in Surgery
SIMON H. BRAGER, M.D.	Instructor in Surgery
J. W. NELSON, A.B., M.D.	Instructor in Surgery
I. RIDGEWAY TRIMBLE, M.D.	Instructor in Surgery
H. ALVAN JONES, M.D.	Instructor in Surgery
RICHARD T. SHACKELFORD, A.B., M.D.	Instructor in Surgery
HENRY F. ULLRICH, M.D., Sc.D.	Instructor in Surgery
RAYMOND F. HELFRICH, A.B., M.D.	Instructor in Surgery
HARRY C. HULL, M.D.	Instructor in Surgery
WILLIAM R. GERAGHTY, B.S., M.D.	Assistant in Surgery
HOWARD B. McELWAIN, M.D.	Assistant in Surgery
A. V. BUCHNESS, A.B., M.D.	Assistant in Surgery
T. J. TOUHEY, M.D.	Assistant in Surgery
CLYDE F. KARNS, B.S., M.D.	Assistant in Surgery
WM. N. McFAUL, JR., M.D.	Assistant in Surgery

SAMUEL H. CULVER, M.D. ....	Assistant in Surgery
ALBERT R. WILKERSON, M.D. ....	Assistant in Surgery
JULIUS GOODMAN, M.D. ....	Assistant in Surgery
ARTHUR G. SIWINSKI, A.B., M.D. ....	Assistant in Surgery
J. H. WILKERSON, M.D. ....	Assistant in Surgery
L. T. CHANCE, M.D. ....	Assistant in Surgery
SAMUEL McLANAHAN, JR., A.B., M.D. ....	Assistant in Surgery
W. ALLEN DECKERT, JR., A.B., M.D. ....	Assistant in Surgery
SAMUEL E. PROCTOR, A.B., M.D. ....	Assistant in Surgery
GEORGE GOVATOS, A.B., M.D. ....	Assistant in Surgery
DWIGHT CURRIE, A.B., M.D. ....	Assistant in Surgery
ROBERT F. HEALY, M.D. ....	Assistant in Surgery
HERBERT M. FOSTER, M.D. ....	Assistant in Surgery
OTTO C. BRANTIGAN, M.D. ....	Assistant in Surgery
DANIEL R. ROBINSON, M.D. ....	Assistant in Surgery

The teaching is done in the anatomical laboratory, the dispensaries, wards, clinical laboratories and operating rooms of the University and Mercy Hospitals, and in the wards and operating rooms of the Baltimore City Hospitals.

Instruction is given by means of lectures, recitations, dispensary work, bedside instruction, ward classes, and clinics. The work begins in the second year, and continues throughout the third and fourth years.

## SECOND YEAR

**TOPOGRAPHIC AND SURGICAL ANATOMY.** The course is designed to bridge the gap between anatomy in the abstract and clinical anatomy as applied to the study and practice of medicine and surgery.

The teaching is done in the anatomical laboratory, and students are required to demonstrate all points, outlines, and regions on the cadaver. Underlying regions are dissected to bring out outlines and relations of structures.

**DIDACTIC LECTURES.** Two hours a week for one semester, augmented by demonstrations with specimens, charts, and cross sections. Dr. Monte Edwards.

**LABORATORY.** Five hours a week for 16 weeks. Dr. Monte Edwards assisted by Drs. Hull, Jones and Brantigan.

**PRINCIPLES OF SURGERY.** This course includes history-taking, records of physical examinations and of operations and progress notes; the preparation of surgical dressing, suture materials and solutions. It includes inflammation, infections, ulcers, gangrene, fistulae and sinuses, hemorrhage, shock and tumors. Lectures and conferences, two hours per week for one semester, to the entire class. Dr. C. R. Edwards.

## THIRD YEAR

**GENERAL AND REGIONAL SURGERY.** Lectures, recitations and clinics on the principles of surgery and general surgery are given three hours a week to the entire class. Drs. Lynn and Wise.

The class is divided into groups and receives instruction in history-taking, gross pathology, and surgical diagnosis—at the bedside and in the dead-house of the Baltimore City Hospitals. Drs. Shipley, Reifschneider, Aycock and Little.

**OPERATIVE SURGERY.** Two courses are given in Operative Surgery under the supervision of Dr. Aycock assisted by Drs. Peake, Karns, Govatos, Ullrich, Brager, Proctor, Culver, Deckert, Foster, Currie, Healy, Brantigan and Robinson; and Dr. Yeager assisted by Drs. Walker, Onnen, Karns and Deckert. The class is divided into sections and each section is given practical and individual work under the supervision of the instructors.

**FRACTURES AND DISLOCATIONS.** This course consists of instruction in the various forms of fractures, dislocations and their treatment. There is a regular schedule of didactic lectures, which is supplemented by practical demonstrations in diagnosis and treatment.

**SURGICAL DISPENSARY.** Under supervision, the student takes the history, makes the physical examinations, attempts the diagnosis, and, as far as possible, carries out the treatment of the ambulatory surgical patients in the University and in the Mercy Hospitals. Mercy Hospital—Dr. Helfrich assisted by the entire dispensary staff. University Hospital—Dr. C. R. Edwards assisted by the entire dispensary staff.

## FOURTH YEAR

**CLINICS.** A weekly clinic is given at the Mercy and at the University Hospitals to one-half the class throughout the year. As far as possible this is a diagnostic clinic. Mercy Hospital—Dr. Wise. University Hospital—Dr. Shipley.

**SURGICAL PATHOLOGY.** A weekly exercise of one hour at Mercy Hospital for one semester at which specimens from the operating room and museum are studied in the gross and microscopically in relation to the case history. Dr. Pessagno.

**TRAUMATIC SURGERY.** Operative and post-operative treatment of accident cases, with instructions as to the relationship between the state, the employee, the employer, and the physician's duty to each. One hour a week to sections of the class throughout the year. Dr. Edmunds.

**CLINICAL CLERKSHIP.** The personal study of assigned hospital patients, under supervision of the staffs of the University and Mercy Hospitals, history-taking, and physical examination of patients, laboratory examinations, attendance at operations and observation of post-operative treatment.



WARD CLASSES. Ward class instruction in small groups will consist of ward rounds, surgical diagnosis, treatment and the after-care of operative cases. Mercy Hospital—Drs. Wise, Hutchins, Jennings, Pessagno and Marvel. University Hospital—Drs. Shipley, Edmunds, Lynn and Edwards.

ANAESTHESIA

S. GRIFFITH DAVIS, M.S., M.D.....	Professor of Anaesthesia
E. HOLLISTER DAVIS, A.B., M.D.....	Assistant in Anaesthesia
MARY J. O'BRIEN, R.N.....	Anaesthetist
RUTH ELLIOTT, R. N.....	Anaesthetist

THIRD YEAR

Lectures on the general physiology of anaesthesia, with consideration of special physiology of each anaesthetic agent. Methods of induction and administration of anaesthesia. Factors influencing the selection of the anaesthetic and types of anaesthetic agents. Preparation and care of the anaesthetized patient.

The lectures are correlated with practical demonstrations during operative clinics at the City Hospitals.

FOURTH YEAR

During operative clinics in both surgery and gynecology each student will be given practical instruction in the administration of anaesthetics and will be required to record such changes as take place in blood pressure, pulse and respiration.

DERMATOLOGY

HARRY M. ROBINSON, M.D.....	Professor of Dermatology
JOHN R. ABERCROMBIE, A.B., M.D.....	Associate in Dermatology
FRANCIS ELLIS, A.B., M.D.....	Associate in Dermatology
HAROLD M. GOODMAN, A.B., M.D.....	Associate in Dermatology
ARTHUR C. MONNINGER, M.D.....	Instructor in Dermatology
HARRY WASSERMAN, M.D.....	Instructor in Dermatology
HARRY M. ROBINSON, JR., B.S., M.D.....	Instructor in Dermatology
JOSEPH C. BERNSTEIN, M.D.....	Instructor in Dermatology
ROLLIN C. HUDSON, M.D.....	Assistant in Dermatology
THOMAS E. ROACH, B.S., M.D.....	Assistant in Dermatology
PAUL SCHONFELD, B.S., M.D.....	Assistant in Dermatology
AMELIA LINK M.D.....	Assistant in Dermatology
H. HANFORD HOPKINS, M.D.....	Assistant in Dermatology

A weekly clinic is given at University and Mercy Hospitals throughout the year. This course consists of demonstrations of the common diseases of the skin in addition to a number of lectures on the general principles of dermatology. Drs. Robinson and Hopkins.

Dispensary instruction in the diagnosis and treatment of skin diseases is given at the University Hospital by Dr. Robinson and dispensary staff; at Mercy Hospital by Dr. Hopkins and dispensary staff.

#### ORTHOPAEDIC SURGERY

ALLEN FISKE VOSHELL, A.B., M.D. ....	Professor of Orthopaedic Surgery
ALBERTUS COTTON, A.M., M.D. ....	Professor of Orthopaedic Surgery
COMPTON RIELY, M.D. ....	Clinical Professor of Orthopaedic Surgery
MOSES GELLMAN, B.S., M.D. ....	Associate Professor of Orthopaedic Surgery
HARRY L. ROGERS, M.D. ....	Associate Professor of Orthopaedic Surgery
H. ALVAN JONES, M.D. ....	Instructor in Orthopaedic Surgery
HENRY F. ULLRICH, M.D., Sc.D. ....	Instructor in Orthopaedic Surgery

In this course didactic, clinical, bedside and out-patient instruction is given. This instruction is provided in the University Hospital Amphitheatre, Mercy Hospital and Dispensary, Kernan Hospital and Industrial School for Crippled Children at Dickeyville and in the Dispensary of the University Hospital and Baltimore City Hospitals.

Lectures or clinics are held once a week at each of the hospitals named. In addition, a weekly bedside clinic is held for small sections of the class at Dickeyville and Mercy Hospital. Daily teaching in the Dispensary is stressed.

The course covers instruction in the special methods of examination, pathology, diagnosis and treatment in this specialty.

Brief outlines and demonstrations are also given of the apparatus employed in physiotherapy, muscle training and corrective gymnastics.

#### ROENTGENOLOGY

HENRY J. WALTON, M.D. ....	Professor of Roentgenology
ALBERTUS COTTON, A.M., M.D. ....	Professor of Roentgenology
EUGENE L. FLIPPIN, M.D. ....	Associate in Roentgenology
WALTER L. KILBY, M.D. ....	Associate in Roentgenology

During the academic year small groups of the fourth year class are given weekly instruction in the diagnostic and therapeutic uses of the Roentgen rays. An effort is made to familiarize the student with the indications for and limitations of Roentgen ray examinations. The history, physics and practical application of Roentgen rays are alluded to but not stressed. Conferences are held with the various departments during the school year which are also open to members of the fourth year class.

#### DISEASES OF THE NOSE AND THROAT

EDWARD A. LOOPER, M.D., D.Oph. ....	Professor of Diseases of the Nose and Throat
WAITMAN F. ZINN, M.D. ....	Clinical Professor of Diseases of the Nose and Throat
FRANKLIN B. ANDERSON, M.D. ....	Associate Professor of Diseases of the Nose and Throat
W. RAYMOND MCKENZIE, M.D. ....	Associate in Diseases of the Nose and Throat
THOMAS R. O'ROURK, M.D. ....	Associate in Diseases of the Nose and Throat

*Third Year.* Instruction to entire class is given in the common diseases of the nose and throat, attention being especially directed to infections of the accessory sinuses, the importance of focal infections in the etiology of general diseases and modern methods of diagnosis. Lectures illustrated by lantern slides are given one hour weekly for seven weeks by Dr. Looper.

*Fourth Year.* Dispensary instruction one and one-half hours daily, to small sections at the University and the Mercy Hospitals. The student is given opportunity to study, diagnose and treat patients under supervision. Ward classes and clinical demonstrations are given in periods of one and one-half hours weekly throughout the session in the University and the Mercy Hospitals.

The Looper Clinic, recently established in the University Hospital for bronchoscopy and esophagoscopy, affords unusual opportunities for students to study diseases of the larynx, bronchi and esophagus. The clinic is open to students daily from 2 to 4 P.M., under direction of Dr. Looper.

The Mercy Hospital Clinic for bronchoscopy and esophagoscopy is under the direction of Dr. Zinn. In these two clinics the etiology, symptomatology, diagnosis and treatment of foreign bodies in the air and food passages, as well as bronchoscopy, are taught to students, as an aid in the diagnosis and treatment of diseases of the lungs.

### GENTO-URINARY SURGERY

W. H. TOULSON, A.B., M.Sc., M.D. . . . .	Professor of Genito-Urinary Surgery
A. J. GILLIS, M.D. . . . .	Clinical Professor of Genito-Urinary Surgery
AUSTIN H. WOOD, M.D. . . . .	Associate in Genito-Urinary Surgery
L. J. MILLAN, M.D. . . . .	Associate in Genito-Urinary Surgery
K. D. LEGGE, M.D. . . . .	Associate in Genito-Urinary Surgery
L. K. FARGO, M.D. . . . .	Associate in Genito-Urinary Surgery
JOHN F. HOGAN, M.D. . . . .	Associate in Genito-Urinary Surgery
W. A. H. COUNCILL, M.D. . . . .	Associate in Genito-Urinary Surgery
SAMUEL T. HELMS, B.S., M.D. . . . .	Instructor in Genito-Urinary Surgery
HARRY S. SHELLEY, B.S., M.D. . . . .	Instructor in Genito-Urinary Surgery

*Third Year.* This course is given for seven hours to the entire class. It consists of lectures and demonstrations including the use of lantern slides and motion pictures. Dr. Toulson.

*Fourth Year.* The course in this year includes explanations and demonstrations of urethroscopy, cystoscopy, ureteral catheterization, renal function tests, urography, urine cultures and the various laboratory procedures. The teaching consists of clinics and ward rounds to small groups, and attendance by members of the senior class upon the out-patients in the dispensary. The student here is placed much on his own responsibility in arriving at a diagnosis. Members of the Staff are in constant attendance for consultations. These dispensary classes are conducted at both the

Mercy and University Hospitals where practically every variety of venereal disease is here encountered and used for teaching purposes.

### DISEASES OF THE RECTUM AND COLON

CHARLES F. BLAKE, A.M., M.D.....	Professor of Diseases of Rectum and Colon
J. DAWSON REEDER, M.D.....	Professor of Diseases of Rectum and Colon
MONTE EDWARDS, M.D.....	Associate in Diseases of Rectum and Colon
JAMES C. OWINGS, M.D.....	Assistant in Diseases of the Rectum and Colon
EUGENE E. COVINGTON, M.D.....	Assistant in Diseases of the Rectum and Colon

*Third Year.* Seven hours to the entire class. This course is for instruction in the diseases of the colon, sigmoid flexure, rectum and anus, and will cover the essential features of the anatomy and physiology of the large intestine as well as the various diseases to which it is subject. Dr. Reeder and Dr. Edwards.

*Fourth Year.* Ward and dispensary instruction is given in the University and Mercy Hospitals, where different phases of the various diseases are taught by direct observation and examination. The use of the proctoscope and sigmoidoscope in the examination of the rectum and sigmoid is made familiar to each student. Mercy Hospital—Dr. Blake. University Hospital—Drs. Reeder and Monte Edwards.

### OTOLOGY

J. W. DOWNEY, M.D.....	Professor of Otology
FRANKLIN B. ANDERSON, M.D.....	Associate Professor of Otology
BENJAMIN S. RICH, A.B., M.D.....	Assistant in Otology
THOMAS R. O'ROURK, M.D.....	Assistant in Otology

The course in otology is planned to give a practical knowledge of the anatomy and physiology of the ear, and its proximity and relationship to the brain and other vital structures. The inflammatory diseases, their etiology, diagnosis, treatment and complications are particularly stressed, with emphasis upon their relationship to the diseases of children, head-surgery and neurology.

*Third Year.* The entire class is given instruction by means of talks, anatomical specimens and lantern slides.

*Fourth Year.* Small sections of the class receive instruction and make personal examinations of patients under the direction of an instructor. The student is urged to make a routine examination of the ear in his ward work in general medicine and surgery.

### NEUROLOGICAL SURGERY

CHARLES BAGLEY, JR., M.A., M.D.....	Professor of Neurological Surgery
RICHARD G. COBLENTZ, M.A., M.D.....	Associate Professor of Neurological Surgery

WILLIAM R. GERAGHTY, B.S., M.D. . . . . Instructor in Neurological Surgery  
 JAMES G. ARNOLD, JR., A.B., M.D. . . . . Hitchcock Fellow in Neurological Surgery

*Third Year.* The course covers instruction in diagnosis and treatment of surgical conditions of the brain, spinal cord, and the peripheral nerves. Ten lectures are given to the entire class. Dr. Bagley.

*Fourth Year.* Weekly ward rounds and conferences are given at the University Hospital. Drs. Bagley and Coblenz.

ONCOLOGY

J. MASON HUNDLEY, JR., M.A., M.D. . . . . Professor of Gynecology  
 GRANT E. WARD, A.B., M.D. . . . . Associate Professor of Surgery

Every facility for the diagnosis and treatment of neoplastic diseases is available; this includes electro-surgery, radium therapy and deep X-ray therapy.

An out-patient clinic is held twice weekly which affords an opportunity for instruction to a limited number of students. The gynecological problems are under the supervision of Dr. Hundley, and the general surgical conditions are under the direction of Dr. Ward.

Instruction, other than dispensary teaching, is given to small groups of students, for one hour a week, in the history, physics and practical application of radium. Drs. Ward and Hundley.

ORAL SURGERY

ROBERT P. BAY, M.D. . . . . Professor of Oral Surgery  
 BRICE M. DORSEY, D.D.S. . . . . Professor of Exodontia  
 CHARLES A. REIFSCHNEIDER, M.D.  
 Associate Professor of Traumatic Surgery and Oral Surgery  
 WILLIAM E. HAHN, D.D.S. . . . . Instructor in Exodontia

This section in the Department of Surgery is established for the teaching of both medical and dental students. A new subdivision in the Dispensary has also been established, and beds will be provided in the University Hospital for the care of patients, who will be available for the teaching of students from both schools.

Senior year: clinics weekly.

Ward instruction and group teaching in dispensary. Instruction includes diagnosis and treatment of diseases of the face, mouth and jaws.

INDUSTRIAL MEDICINE AND SURGERY

PAGE EDMUNDS, M.D. . . . . Professor of Traumatic Surgery  
 G. CARROLL LOCKARD, M.D. . . . . Professor of Clinical Medicine  
 CHARLES A. REIFSCHNEIDER, M.D.  
 Associate Professor of Traumatic Surgery and Oral Surgery

This section is under the combined supervision of the Medical and Surgical Departments and is a cooperative effort by members of the Medical School and Hospital Staff to afford means for study, both clinical and laboratory, of the patient who has been subjected to industrial hazard, either traumatic or medical, so that adequate care may be instituted to promote his physical well-being. The entire resources of the Laboratories of the Medical School and Hospital are available as needed.

Under direction of this department limited undergraduate instruction will be given, especially in the methods of examination and of keeping records; and in the general medico-legal principles as they affect the industrial employee, the employer, the general insurers, the physician and the hospital. There will also be instruction upon methods of making life insurance and other physical examinations, whether for employment or for health purposes. The wards of the University, Mercy and City Hospitals will supply suitable material for bed-side instruction.

### DEPARTMENT OF OBSTETRICS

L. H. DOUGLASS, M.D.	Professor of Obstetrics
J. McFARLAND BERGLAND, B.S., M.D.	Associate Professor of Obstetrics
EMIL NOVAK, A.B., M.D., Sc.D.	Associate Professor of Obstetrics
J. G. M. REESE, M.D.	Assistant Professor of Obstetrics
M. ALEXANDER NOVEY, A.B., M.D.	Assistant Professor of Obstetrics
ISADORE A. SIEGEL, A.B., M.D.	Associate in Obstetrics
E. P. H. HARRISON, A.B., M.D.	Associate in Obstetrics
MARGARET B. BALLARD, M.D.	Assistant in Obstetrics
KENNETH B. BOYD, M.D.	Assistant in Obstetrics
FRANK K. MORRIS, A.B., M.D.	Assistant in Obstetrics
DUDLEY P. BOWE, A.B., M.D.	Assistant in Obstetrics
JOHN E. SAVAGE, B.S., M.D.	Assistant in Obstetrics
W. ALLEN DECKERT, A.B., M.D.	Assistant in Obstetrics
JAROSLAV HULLA, M.D.	Assistant in Obstetrics
MARIUS P. JOHNSON, A.B., M.D.	Assistant in Obstetrics
MAXWELL L. MAZER, M.D.	Assistant in Obstetrics
GEORGE A. HART, M.D.	Assistant in Obstetrics
JOSEPH M. BLUMBERG, B.S., M.D.	Assistant in Obstetrics
HUGH B. McNALLY, B.S., M.D.	Assistant in Obstetrics
FERD. E. KADAN, A.B., M.D.	Assistant in Obstetrics
CATHERINE BLUMBERG, A.B., M.D.	Assistant in Obstetrics

*Third Year.* Two lectures and recitations are given each week to the entire class. Drs. Douglass, Novak, Bergland, Novoy and Savage.

Clinics, recitations and lectures are given to one-half of the class each week at the Baltimore City Hospitals and the University Hospital. Drs. Reese and Seigel.

Demonstrations at the University Hospital Dispensary are given to sections of the class. Drs. Siegel and Harrison.

Students observe and assist in deliveries at the University and Baltimore City Hospitals throughout the year.

*Fourth Year.* A clinical conference is given each week. Dr. Douglass.

Ward classes are given six hours per week, for five weeks, to sections of the class at the University Hospital. Drs. Douglass, Reese and Novey. Manikin work is given to sections of the class at the University Hospital. Drs. Morris, Bowe and Deckert.

Each member of the senior class is required to conduct the delivery of at least ten women in their homes under the supervision of the teaching and resident staff. Students observe, assist in and conduct, under supervision, deliveries at the University Hospital.

## DEPARTMENT OF GYNECOLOGY

J. MASON HUNDLEY, JR., M.A., M.D.....	Professor of Gynecology
ABRAM S. SAMUELS, A.B., M.D.....	Clinical Professor of Gynecology
GEORGE A. STRAUSS, JR., M.D.....	Assistant Professor of Gynecology
R. G. WILLSE, M.D.....	Assistant Professor of Gynecology
THOMAS K. GALVIN, M.D.....	Assistant Professor of Gynecology
LEO BRADY, A.B., M.D.....	Assistant Professor of Gynecology
JOHN T. HIBBITTS, M.D.....	Associate in Gynecology
EDWARD P. SMITH, M.D.....	Associate in Gynecology
KENNETH B. BOYD, M.D.....	Associate in Gynecology
THOMAS S. BOWYER, A.B., M.D.....	Instructor in Gynecology
JOSEPH V. CASTAGNA, M.D.....	Instructor in Gynecology
ERNEST S. EDLOW, A.B., M.D.....	Instructor in Gynecology
BEVERLEY C. COMPTON, A.B., M.D.....	Assistant in Gynecology
W. ALLEN DECKERT, A.B., M.D.....	Assistant in Gynecology
FRANK K. MORRIS, A.B., M.D.....	Assistant in Gynecology
JOHN C. DUMLER, B.S., M.D.....	Assistant in Gynecology
H. L. GRANOFF, A.B., M.D.....	Assistant in Gynecology

*Third Year.* A course of thirty lectures and recitations is given to the whole class. In addition, a short course of lecture-demonstrations is given at the Baltimore City Hospitals, consisting of eight periods of one hour each, in which small groups of students are instructed in the fundamentals of gynecological diagnosis and examination.

*Fourth Year.* Operative clinics—lectures and demonstrations—are given six hours per week, for five weeks, to sections of the class.

Instruction in Female Urology is given, and a small number of students may attend the cystoscopic dispensary which is held twice weekly.

The course in Gynecology also includes instruction in the diagnosis and treatment of cancer of the generative organs, small groups of students attending the Oncological dispensary for additional work.

## DEPARTMENT OF OPHTHALMOLOGY

CLYDE A. CLAPP, M.D.	Professor of Ophthalmology
M. RANDOLPH KAHN, M.D.	Clinical Professor of Ophthalmology
H. K. FLECK, M.D.	Clinical Professor of Ophthalmology
R. D. WEST, M.D.	Associate in Ophthalmology
HENRY F. GRAFF, A.B., M.D.	Associate in Ophthalmology
JONAS FRIEDENWALD, M.A., M.D.	Lecturer in Ophthalmic Pathology
JOSEPH I. KEMLER, M.D.	Associate in Ophthalmology
F. A. HOLDEN, M.D.	Instructor in Ophthalmology
F. EDWIN KNOWLES, JR., M.D.	Instructor in Ophthalmology
JOHN G. RUNKLE, M.D.	Assistant in Ophthalmology
THOMAS R. O'ROURK, M.D.	Assistant in Ophthalmology
JEROME SNYDER, B.S., M.D.	Assistant in Ophthalmology
MILTON C. LANG, M.D.	Assistant in Ophthalmology
HAROLD C. DIX, B.S., M.D.	Assistant in Ophthalmology

*Third Year.* Second semester. Dr. Kahn will give a course reviewing the anatomy and physiology of the eye and the methods used in making the various examinations. Errors of refraction and their effect upon the general system will be explained. Weekly section work, demonstrating the use of the ophthalmoscope, will be carried on during the entire session.

*Fourth Year.* Clinics and demonstrations in diseases of the eye, weekly, for one year. Dr. Clapp.

This course consists of lectures upon the diseases of the eye, with particular reference to their diagnosis and relation to general medicine. Special lectures will be given upon vascular changes in the eye and upon the pathology of the eye. Some operations will be demonstrated by motion pictures.

Weekly ward classes at the University, The Baltimore Eye, Ear and Throat and Mercy Hospitals during which the eye grounds in the various medical and surgical conditions are demonstrated. Drs. Fleck, West, Kemler, Graff and Knowles.

Also daily demonstrations are given in the taking of histories and the diagnosis and treatment of the various conditions as seen in the dispensary.

Owing to the necessity of making a large number of examinations of the fundus, both in the third and fourth year, students are required to furnish their own ophthalmoscopes.

Third Year—Total number of hours 30.

Fourth Year—Total number of hours 46.



DEPARTMENT OF ART AS APPLIED TO MEDICINE

CARL DAME CLARKE. . . . . Associate Professor of Art as Applied to Medicine

This department is maintained for the purpose of supplying pictorial and plastic illustrations for visual teaching in the classrooms of the University and for publication in scientific periodicals.

Special courses of instruction are given to qualified students.

**FIRST YEAR SCHEDULE**  
**FIRST SEMESTER, SEPTEMBER 22, 1938 TO JANUARY 28, 1939**

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9.00 to 1.00	Gross Anatomy—Lectures and Laboratories					(9-12)
1.00 to 2.00	Lunch					
2.00 to 5.00	*Histology and Embryology 32-34			Histology and Embryology 32-34		

\* Course begins October 6, 1938.

**SECOND SEMESTER, JANUARY 30 TO MAY 27, 1939**

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9.00 to 10.00	Biological Chemistry  29	Biological Chemistry  29	Biological Chemistry  29	Biological Chemistry  29	Biological Chemistry  29	
10.00 to 1.00	Laboratory — Biological Chemistry  <i>Sect. A</i>	Laboratory — Biological Chemistry  <i>Sect. B</i>	Laboratory — Biological Chemistry  <i>Sect. A</i>	Laboratory — Biological Chemistry  <i>Sect. B</i>	(10-11) Psychiatry  29  (11-1) Biological Chemistry Conference 29	
1:00 to 2:00	LUNCH					
2:00 to 5:00	Neuro-anatomy  32-34	Neuro-anatomy  32-34	Biological Chemistry Conference  (2-4) 29	Neuro-anatomy  32-34		

Locations of Lecture Halls and Laboratories:

Adm. 1—First Floor, Administration Building, Lombard and Greene Streets.

A. H.—Anatomical Hall—Upper Hall, N. E. Cor. Lombard and Greene Streets.

C. H.—Chemical Hall, Lower Hall, N. E. Cor. Lombard and Greene Streets.

29 — 29 South Greene Street, First Floor.

32-34 — 32-34 South Paca Street, Sixth Floor.

Anatomy Laboratory—Third Floor, Gray Laboratory, Lombard and Greene Streets.

Biological Chemistry Laboratory—Third Floor, 31 South Greene Street.

Histology and Embryology Laboratory—32-34 South Paca Street, Sixth Floor.

*Mid-Year Examinations—January 23-28, 1939*

*Final Examinations—May 22-27, 1939*

**SECOND YEAR SCHEDULE**  
**FIRST SEMESTER, SEPTEMBER 22, 1938 TO JANUARY 28, 1939**

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8.30 to 9.30			Medicine <i>Adm. 1</i>		Psychiatry <i>Adm. 1</i>	
9.30 to 10.30	*Neuro-anatomy  32-34	Neuro-anatomy  32-34	Pharmacology <i>Adm. 1</i>	Neuro-anatomy  32-34	Pharmacology <i>Adm. 1</i>	
10.30 to 11.30			Bacteriology <i>Adm. 1</i>		Methods of Neurological Examination <i>C. II.</i>	
11.30 to 12.00	LUNCH					
12.00 to 2.00	Elective	†Bacteriology Laboratory				
2.00 to 5.00		Elective		Pharmacology Laboratory <i>Sect. A</i>	Pharmacology Laboratory <i>Sect. B</i>	

\*Neuro-anatomy course ends December 1, 1938.

† Bacteriology Laboratory—Section work during the last month.

## SECOND SEMESTER, JANUARY 30 TO MAY 27, 1939

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8.30 to 9.30	Surgery <i>Adm. 1</i>	Surgery <i>Adm. 1</i>	Surgical Anatomy <i>Adm. 1</i>			
9.30 to 10.30	Pharmacology <i>Adm. 1</i>	Pharmacology <i>Adm. 1</i>	Surgical  Anatomy Laboratory	Medical Clinic <i>Amp.</i>	Pharmacology <i>Adm. 1</i>	
10.30 to 11.30	Pathology <i>C. H.</i>	Pathology <i>C. H.</i>		Pathology <i>C. H.</i>	Pathology <i>C. H.</i>	
11.30 to 12.00	LUNCH					
12.00 to 2.00	Pathology Laboratory	Pathology Laboratory	Optional period  Pathology  Immunology	Pathology Laboratory	Pathology Laboratory	
2.00 to 3.00	Surgical Anatomy <i>Adm. 1</i>	Immunology  Laboratory	Immunology  Laboratory	Pharmacology Laboratory <i>Sect. A</i> —	Pharmacology Laboratory <i>Sect. B</i> —	
3.00 to 5.00	Surgical Anatomy Laboratory			Physical Diagnosis <i>Sect. B</i> (3.00-5.00)	Physical Diagnosis <i>Sect. A</i> (3.00-5.00)	

|| Immunology Laboratory—Section work during last two months.

Locations of Lecture Halls and Laboratories:

Adm. 1—First Floor, Administration Building, Lombard and Greene Streets.

A. H.—Anatomical Hall—Upper Hall, N. E. Cor. Lombard and Greene Streets.

C. H.—Chemical Hall, Lower Hall, Lombard and Greene Streets.

*Amp.*—Wilson Memorial Amphitheatre, New University Hospital, Greene and Redwood Streets, Eighth Floor

32-34—Sixth floor, 32-34 South Poca Street

*Laboratories:*

Bacteriology—Second Floor, 31 South Greene Street.

Immunology—Second Floor, 31 South Greene Street.

Pathology—Second Floor, 31 South Greene Street.

Pharmacology—Second Floor, Gray Laboratory, Lombard and Greene Streets.

Surgical Anatomy—Third Floor, Gray Laboratory, Lombard and Greene Streets.

*Mid-Year Examinations—January 23-28, 1939*

*Final Examinations—May 22-27, 1939*

**THIRD YEAR SCHEDULE**  
**SEPTEMBER 22, 1938 TO MAY 27, 1939**

**SCHEDULE 1**

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8.30 to 9.30	(Whole Class) Obstetrics <i>C. H.</i> †Gynecology Apr. 17 to May 8	(Whole Class) Surgery <i>C. H.</i>	(Whole Class) Obstetrics <i>C. H.</i> †Gynecology Apr. 19 to May 10	(Whole Class) Surgery <i>C. H.</i>	(Whole Class) Pathology <i>C. H.</i>	(Whole Class) Surgery <i>C. H.</i> †Gynecology Feb. 4 to Mar. 18 inc.
9.30 to 10.00	Transfer to Baltimore City Hospitals					
10.00 to 12.00	Physical Diagnosis, Pathology, Neurology and Pediatrics at B. C. H.					
12.00 to 1.00	Transfer and Lunch	Transfer and Lunch	Lunch	Transfer and Lunch	Lunch	
1.00 to 2.00	(Whole Class)  Otolaryngology, Proctology, Urology  Nose & Throat,  <i>C. H.</i>	(Whole Class) *Gynecology †Eye—10 wks. (Jan. 31 to April 4) †Oncology —5 wks. (April 11 to May 9) <i>C. H.</i>	Medical  Clinic  <i>B. C. H.</i>	(Whole Class)  Clinical  Pathology  <i>C. H.</i>	Obstetrical  Clinic  <i>B. C. H.</i>	
2.00 to 4.00	(Whole Class) Pathology Laboratory <i>31</i>		Surgery (2.00 to 4.00) — Pediatrics (2.00 to 4.30) —	(Whole Class)  Clinical  Pathology  —	Surgery (2.00 to 4.00) — Pediatrics (2.00 to 4.30) —	
4.00 to 5.00	(Whole Class) Public Health  <i>C. H.</i>	(Whole Class) Physical Diagnosis, Psychiatry, Legal Medicine <i>C. H.</i>	Gynecology Orthopaedics Psychiatry (Subgroups of Surgery Group) (4.00 to 5.00)	Laboratory  <i>31</i>	Gynecology Orthopaedics Psychiatry (Subgroups of Surgery Group) (4.00 to 5.00)	

\*First Semester.

† Second Semester.

**SCHEDULE 2**

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
8.30 to 9.30	Same as Schedule 1						
9.30 to 10.20	Pediatrics <i>C. H.</i>	Medicine <i>C. H.</i>	Medicine <i>C. H.</i>	Therapeutics <i>C. H.</i>	Medicine <i>C. H.</i>	Neurology <i>C. H.</i>	
10.30 to 12.30	Operative Surgery—29 South Greene Street Medical and Surgical Dispensaries—(Univ. and Mercy Sections)						
12.30 to 1.00	LUNCH						
1.00 to 2.00	Same as  Schedule 1	Medical Clinic <i>Amph.</i>	Ophthalmoscopy (5 weeks) <i>B. E. H.</i> — Obstetrics (5 weeks) Univ. Hosp. — Otology (5 wks.) <i>Adm. 1</i>	Same as  Schedule 1	Psychiatry (9 weeks) Dermatology (6 weeks)	N.B.—The whole section reports to psychiatry for first three weeks, then subdivides. <i>Adm. 1</i> for first 3 wks. U. H. Disp.	
2.00 to 4.00							
4.00 to 5.00							Obstetrics <i>C. H.</i>

The Junior Class will be divided into two sections—A and B. Each section reports to classes in keeping with the following schedule assignment, in which the letters represent the class sections and the numerals indicate the schedules to be followed for the 15-week periods shown.

*Schedule Assignment*

<i>Periods</i>	<i>Sections and Schedules</i>
September 22 to January 21.....	A-1, B-2
January 30 to May 13.....	B-1, A-2

Locations of Lecture Halls, etc.

- Adm. 1—Administration Bldg., Lombard and Greene Streets.
- Amp.—Wilson Memorial Amphitheatre, New University Hospital, Eighth Floor.
- B. C. H.—Baltimore City Hosps., 4940 Eastern Ave.
- B. E. H.—Baltimore Eye, Ear and Throat Hospital, 1214 Eutaw Place.
- C. H.—Chemical Hall, Lower Hall, N. E. Cor. Lombard and Greene Sts.
- Univ. Hosp.—New University Hospital, Greene and Redwood Streets.
- U. H. Disp.—Old Hospital Building, S. W. Cor. Lombard and Greene Streets.
- 31—31 South Greene Street.
- Clinical Pathology Laboratory—31 South Greene St., Second Floor.
- Pathology Laboratory—31 South Greene Street, Special Rooms, Basement.

*Mid-Year Examinations—January 23-28, 1939*

*Final Examinations—May 15-27, 1939*

**FOURTH YEAR SCHEDULE**  
**SEPTEMBER 22, 1938 TO MAY 27, 1939**

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
9.00 to 11.00	Ward Classes (a) Medicine (a) Surgery (b) Obstetrics (d) Pediatrics	Ward Classes (a) Medicine (a) Surgery (b) Gynecology (c) Gynecology	Ward Classes (a) Medicine (a) Surgery (b) Obstetrics (d) Pediatrics	Ward Classes (a) Medicine (a) Surgery (b) Gynecology (c) Gynecology	Ward Classes (a) Medicine (a) Surgery (b) Obstetrics (d) Pediatrics	Ward Classes (a) Medicine (a) Surgery (b) Gynecology (d) Pediatrics
11.00 to 12.00	Orthopaedic Surgery  <i>Univ. Sec. Amp. P. &amp; S. Sec. 51</i>	Medical Clinic <i>Univ. Sec. Amp.</i>  Surgical Pathology <i>P. &amp; S. Sec. 40</i>	Clinical Pathological Conference  <i>Univ. Sec. C. II. P. &amp; S. Sec. 34</i>	Surgical Clinic  <i>Univ. Sec. Amp P. &amp; S. Sec. 51</i>	Medical Clinic  <i>Univ. Sec. Amp. P. &amp; S. Sec. 34</i>	Pediatric Clinic  <i>Univ. Sec. Amp. P. &amp; S. Sec. 34</i>
12.00 to 2.00	Dispensary Lunch and Transfer	Dispensary and Lunch	Dispensary Lunch and Transfer	Dispensary and Lunch	Dispensary Lunch and Transfer	Dispensary
2.15 to 3.15	Dermatology Clinic  (Full Class at Univ. Hosp.)  <i>Amp.</i>	Neurology Clinic  <i>Univ. Sec. Amp. P. &amp; S. Sec. 34</i>	Eye and Ear Clinic  (Full Class at Univ. Hosp.)  <i>Amp.</i>	Obstetrical Clinic  (Full Class at Univ. Hosp.)  <i>Amp.</i>	Public Health Sept. 23 to Oct. 28  Gastro-Enterology Clinic Nov. 4  (Full Class at Univ. Hosp.)  <i>Amp.</i>	
3.30 to 5.00	<i>P. &amp; S. Sect. and Univ. Sect. Ward Classes</i>	<i>P. &amp; S. Sect. Ward Classes</i> Medicine Orthopaedics Pediatrics	<i>P. &amp; S. Sect. Ward Classes</i> Public Health  Nose and Throat	<i>P. &amp; S. Sect. Ward Classes</i> Medicine Proctology Pediatrics	<i>P. &amp; S. Sect. Ward Classes</i> Neurology Roentgenology Psychiatry <i>Amp.</i>	
3.30 to 5.00	See special schedule	<i>Univ. Sect. Ward Classes</i> Medicine Proctology  Oncology (3.30-4.30) <i>Amp.</i>	<i>Univ. Sect. Ward Classes</i> Public Health  Urology  Eye and Ear	<i>Univ. Sect. Ward Classes</i> Therapeutics  Nose and Throat	<i>Univ. Sect. Ward Classes</i> Neurology  Orthopaedic Surgery (Kernan Hospital)  Psychiatry	

- (a)—Univ. and P. & S. Sections.
- (b)—Univ. Section.
- (c)—Whole P. & S. special group.
- (d)—P. & S. special group, divided attendance at Univ. and P. & S.

The Senior Class is divided into two sections, which report, one at Lombard and Greene Streets, the other at Calvert and Saratoga Streets, for one semester each, then rotate.

Each section of the class is divided into three groups—Medical, Surgical, and Special. These groups will rotate on the following dates:

<i>First Semester</i>		<i>Second Semester</i>	
1st period.....	Sept. 22—Oct. 29	1st period.....	Jan. 30—Mar. 4
2nd period.....	Oct. 31—Dec. 3	2nd period.....	Mar. 6—Apr. 8
3rd period.....	Dec. 5—Jan. 21	3rd period.....	Apr. 10—May 13

C. H.—Chemical Hall—N. E. Cor. Lombard and Greene Streets.  
 Amp.—Wilson Memorial Amphitheatre—New University Hospital.  
 P. & S., 34—Second Floor, Calvert and Saratoga Streets.  
 P. & S., 40, 51—Fourth Floor, Calvert and Saratoga Streets.

For sub-sections of P. & S. ward classes, 3.30 to 5.00 p. m., see supplementary schedule at Mercy Hospital. For sub-sections of U. H. ward classes, 3.30 to 5.00 p. m., see Medical School Bulletin Board.

Mid-Year Examinations—January 23-28, 1939

Final Examinations—May 15-20, 1939

## REQUIREMENTS FOR ADMISSION

The minimum requirements for admission to the School of Medicine are:

- (a) Graduation from an approved secondary school, or the equivalent in entrance examinations, and
- (b) Three years of acceptable premedical credit earned in an approved college of arts and sciences. The quantity and quality of this preprofessional course of study shall be not less than that required for recommendation by the institution where the premedical courses are being, or have been, studied.

The premedical curriculum shall include basic courses in

English

Biology (Invertebrate and Vertebrate Zoology are preferred to General Biology)

Inorganic Chemistry

Organic Chemistry

Physics

French or German,

and such elective courses as will complete a balanced three-year schedule of study.

The elective courses should be taken from the following three groups:

<i>Humanities</i>	<i>Natural Sciences</i>	<i>Social Sciences</i>
English	Comparative Vertebrate	Economics
Scientific German, or	Anatomy	History
French (A reading knowl-	Embryology	Political Science
edge of either language is	Physical Chemistry or	Psychology
desirable, although Ger-	Quantitative Analysis	Sociology, etc.
man is preferred)	(Physical Chemistry Pre-	
Philosophy	ferred)	
	Mathematics	
	Histological Technique*	

\* Should not be taken in a three-year premedical curriculum.

Not less than 36 semester hours (or the equivalent in quarter or session hours, or courses) should be taken in the humanities and social sciences.

Wherever possible, a premedical student should complete a four-year curriculum and earn the baccalaureate degree.

In accepting candidates for admission, preference will be given to those applicants who have high scholastic records in secondary school and college; satisfactory scores in the Moss Aptitude Test (which is given each fall by the Association of American Medical Colleges in the institutions that are preparing students for medicine); the most favorable letters of recommendation from their respective premedical committees, or from one instructor in each of the departments of biology, chemistry, and physics;



and who in all other respects give every promise of becoming successful students and physicians of high standing.

Application blanks may be secured by addressing the Committee on Admissions, School of Medicine, University of Maryland, Baltimore. Applications for admission will be received beginning October 1, 1938, for the incoming 1939 classes.

Those candidates for admission who are accepted will receive certificates of entrance from the Director of Admissions of the University.

### COMBINED COURSE IN ARTS AND SCIENCES, AND MEDICINE

A combined seven years' curriculum leading to the degrees of Bachelor of Science and Doctor of Medicine is offered by the University of Maryland. The first three years are taken in residence in the College of Arts and Sciences at College Park, and the last four years in the School of Medicine in Baltimore. (See University catalogue for details of quantitative and qualitative premedical course requirements.)

Upon the successful completion of the first year in the School of Medicine, and upon the recommendation of the Dean, the degree of Bachelor of Science may be conferred by the College of Arts and Sciences, at the Commencement following the second year of residence.

### RULES

1. All students are required to take the spring examinations unless excused by the Dean. No student will be permitted to advance from a lower to a higher class with conditions.

2. Should a student be required to repeat any year in the course, he must pay regular fees.

3. A student failing in final examinations for graduation at the end of the fourth year will be required to repeat the entire course of the fourth year and to take examinations in such other branches as may be required, should he again be permitted to enter the school as a candidate for graduation.

4. The general fitness of a candidate for graduation, as well as the results of his examinations, will be taken into consideration by the Faculty.

5. At the beginning of the first year, all students must be prepared to purchase microscopes of a satisfactory type equipped with a mechanical stage and a sub-stage lamp.

A standard microscope of either Bausch & Lomb, Leitz, Spencer, or Zeiss make, fitted with the following attachments, will fill the requirements:

Triple nose piece: 10 x and 5 x Oculars

Wide aperture stage: 16 mm. and 4 mm. Objectives

Quick Screw condenser (Abbe): 1.9 mm. 125 N.A. Oil Immersion Lens

All used microscopes are subject to inspection and approval before their use in the laboratory is permitted. The student is cautioned against the purchase of such an instrument before its official approval by the school.

6. Students in the third and fourth year classes are required to furnish their own ophthalmoscopes.

All the above rules, as well as the fees stated below, relate to the year ending June 3, 1939 only. The right is reserved to make changes in the curriculum, the requirements for graduation, the fees and in any of the regulations whenever the University authorities deem it expedient.

### FEEES

Matriculation fee (paid once).....	\$10.00
Tuition fee (each year) for residents of Maryland.....	450.00
Tuition fee (each year) for non-residents.....	600.00
Laboratory fee (each year).....	25.00
Special and re-examination fee.....	5.00
Graduation fee.....	15.00

No fees are returnable.

The above fees apply to all students who matriculate in the School of Medicine in any class for the session beginning September 22, 1938.

All students, after proper certification, are required to register at the Office of the Registrar. (See calendar in front part of this bulletin for dates for the payments of fees, and the note regarding late registration fee.)

The matriculation fee is payable at the time the applicant is offered acceptance as a student.

The laboratory fee and one-half of the tuition fee for the year shall be paid at the time of the first semester registration, and the remainder of the tuition fee shall be paid at the second semester registration date.

Failure to meet these conditions will debar automatically the student from attendance on classes and other privileges of the University.

When offering checks in payment of tuition and other fees, students are requested to have them drawn in the exact amount of such fees. Personal checks whose face value is in excess of the fees due will be accepted only for collection.

### DEFINITION OF RESIDENCE STATUS OF STUDENTS\*

Students who are minors are considered to be resident students if, at the time of their registration, the parents\* have been residents of this State for at least one year.

\* The term "parents" includes persons who, by reason of death or other unusual circumstances, have been legally constituted the guardians of or stand in loco parentis to such minor students.

Adult students are considered to be resident students if, at the time of their registration, they have been residents of this State for at least one year, provided such residence has not been acquired while attending any school or college in Maryland.

The status of the residence of a student is determined at the time of his first registration in the University and may not thereafter be changed by him unless, in the case of a minor, his parents\* move to and become legal residents of this State by maintaining such residence for at least one full calendar year. However, the right of the student (minor) to change from a non-resident to a resident status must be established by him prior to registration for a semester in any academic year.

### STATE MEDICAL STUDENT QUALIFYING CERTIFICATES

Candidates for admission who live in or expect to practice medicine in Pennsylvania, New Jersey or New York, should apply to their respective state boards of education for medical student qualifying certificates (Pennsylvania and New Jersey) or approval of applications for medical student qualifying certificates (New York).

Those students who are accepted must file their state certificates in the office of the Committee on Admissions, School of Medicine, before registration.

### MEDICAL CARE OF STUDENTS

The Medical Council has made provision for the systematic care of students in the Medical School, according to the following plan:

1. *Preliminary Examination*—All new students will be examined during the first week of the semester. Notice of the date, time, and place of the examination will be announced to the classes and on the bulletin board. The passing of this physical examination is necessary before final acceptance of any student.

2. *Medical Attention*—Students in need of medical attention will be seen by the School Physician, Dr. T. N. Carey, in his office at the Medical School, between 4 and 5 P.M., daily, except Saturday and Sunday. In cases of necessity, students will be seen at their homes.

3. *Hospitalization*—If it becomes necessary for any student to enter the hospital during the school year, the Medical Council has arranged for the payment of part or all of his hospital expenses, depending on the length of his stay and special expenses incurred. This applies only to students admitted through the School Physician's Office.

4. Prospective students are advised to have any known physical defects corrected before entering school in order to prevent loss of time which later correction might incur. As minor visual defects are frequently unrecognized until detected by an ophthalmologist, it is especially urged that all new students have their eyes examined and any error of refraction corrected before beginning the course.

## PRIZES AND SCHOLARSHIPS

### FACULTY PRIZE

The Faculty each year awards a Gold Medal to the Graduate who during the four years of his course has shown the greatest proficiency in preparing for the practice of medicine. The five candidates standing next in order will be awarded Certificates of Honor.

#### DR. A. BRADLEY GAITHER MEMORIAL PRIZE

A prize of \$25.00 is given each year by Mrs. A. Bradley Gaither as a memorial to the late Dr. A. Bradley Gaither, to the student in the senior class doing the best work in Genito-Urinary Surgery.

#### SAMUEL M. SHOEMAKER PRIZE

An annual prize of \$25.00 has been established by Mrs. Samuel M. Shoemaker and Mrs. Bartlett F. Johnston as a memorial to Samuel M. Shoemaker for the best essay on "Milk in Relation to Public Health" written by a student in the senior class.

## SCHOLARSHIPS\*

### *The Dr. Samuel Leon Frank Scholarship*

(Value \$100.00)

This scholarship was established by Mrs. Bertha Rayner Frank as a memorial to the late Dr. Samuel Leon Frank, an alumnus of this University.

It is awarded by the Trustees of the Endowment Fund of the University each year upon nomination by the Medical Council "to a medical student of the University of Maryland, who in the judgment of said Council, is of good character and in need of pecuniary assistance to continue his medical course."

This scholarship is awarded to a second, third or fourth year student who has successfully completed one year's work in this school. No student may hold such scholarship for more than two years.

\* Note: Scholarships, unless specifically renewed on consideration of application, are for one year only.

*The Charles M. Hitchcock Scholarships*

(Value \$100.00 each)

Two scholarships were established from a bequest to the School of Medicine by the late Charles M. Hitchcock, M.D., an alumnus of the University.

These scholarships are awarded annually by the Trustees of the Endowment Fund of the University, upon nomination by the Medical Council, to students who have meritoriously completed the work of at least the first year of the course in medicine, and who present to the Council satisfactory evidence of a good moral character and of inability to continue the course without pecuniary assistance.

*The Randolph Winslow Scholarship*

(Value \$100.00)

This scholarship was established by the late Randolph Winslow, M.D., LL.D.

It is awarded annually by the Trustees of the Endowment Fund of the University, upon nomination by the Medical Council, to a "needy student of the Senior, Junior, or Sophomore Class of the Medical School."

"He must have maintained an average grade of 85% in all his work up to the time of awarding the scholarship."

"He must be a person of good character and must satisfy the Medical Council that he is worthy of and in need of assistance."

*Dr. Leo Karlinsky Memorial Scholarship*

(Value \$125.00)

This scholarship was established by Mrs. Ray Mintz Karlinsky as a memorial to her husband, the late Dr. Leo Karlinsky, an alumnus of the University.

It is awarded annually by the Trustees of the Endowment Fund of the University, upon the nomination of the Medical Council, to "a needy student of the Senior, Junior or Sophomore Class of the Medical School."

He must have maintained in all his work up to the time of awarding the scholarship a satisfactory grade of scholarship.

He must be a person of good character and must satisfy the Medical Council that he is worthy of and in need of assistance.

*The University Scholarship*

A scholarship which entitles the holder to exemption from payment of tuition fee for the year, is awarded annually by the Medical Council

to a student of the senior class in need of assistance who presents to the Medical Council satisfactory evidence of good character and scholarship.

*Frederica Gehrman Scholarship*

(Value \$200.00)

(Not open to holders of Warfield and Cohen Scholarships)

This scholarship was established by the bequest of the late Mrs. Frederica Gehrman and is awarded to a third-year student who at the end of the second year has passed the best practical examinations in Physiology, Pharmacology, Pathology, Bacteriology, Immunology, Serology, Surgical Anatomy and Neuro-Anatomy.

*The Clarence and Geneva Warfield Scholarships*

(Value \$300.00 each)

There are five scholarships established by the Regents from the income of the fund bequeathed by the will of Dr. Clarence Warfield.

Terms and Conditions: These scholarships are available to students of any of the classes of the course in medicine. Preference is given to students from the counties of the State of Maryland which the Medical Council may from time to time determine to be most in need of medical practitioners.

Any student receiving one of these scholarships must agree, after graduation and a year's internship, to undertake the practice of medicine, for a term of two years, in the county to which the student is accredited, or in a county selected by the Council. In the event that a student is not able to comply with the condition requiring him to practice in the county to which he is accredited by the Council, the money advanced by the Regents shall be refunded by the student.

*Israel and Cecilia E. Cohen Scholarship*

(Value \$150.00)

This scholarship was established by the late Eleanor S. Cohen in memory of her parents, Israel and Cecilia E. Cohen. Terms and conditions: This scholarship will be available to students of any one of the classes of the course in Medicine; preference is given to students of the counties in the State of Maryland which the Medical Council may from time to time determine to be most in need of medical practitioners. Any student receiving one of these scholarships must, after graduation and a year's internship, agree to undertake the practice of medicine for a term of two years in the county to which the student is accredited, or in a county selected by the Council. In the event that a student is not able to comply with the con-

dition requiring him to practice in the county to which he is accredited by the Council, the money advanced by the Regents shall be refunded.

*Dr. Horace Bruce Hetrick Scholarship*  
(Value \$125.00)

This scholarship was established by Dr. Horace Bruce Hetrick as a memorial to his sons, Bruce Hayward Hetrick and Augustus Christian Hetrick. It is to be awarded by the Medical Council to a student of the senior class.

ANNUAL HOSPITAL APPOINTMENTS

Each session the following annual appointments are made from among the graduates of the school:

TO THE UNIVERSITY HOSPITAL

Six Residents in Surgery	Resident in Nose and Throat
Three Residents in Medicine	Resident in Roentgenology
Three Residents in Obstetrics	Twelve Senior Internes rotating in Medicine and Surgery
Two Residents in Gynecology	Twelve Junior Internes rotating in the Specialties
Resident in Pediatrics	

TO THE MERCY HOSPITAL

Five Residents in Surgery	Resident in Gynecology
Two Residents in Medicine	Nine Internes on Rotating Service

NOTICE TO STUDENTS

The personal expenses of the students are at least as low in Baltimore as in any large city in the United States. The following estimates of a student's personal expenses for the academic year of eight months have been prepared by students, and are based upon actual experience. *In addition to these the student must bear in mind the expenditure for a microscope.*

<i>Items</i>	<i>Low</i>	<i>Average</i>	<i>Liberal</i>
Books.....	\$50	\$75	\$100
College Incidentals.....	20	20	20
Board, eight months.....	200	250	275
Room rent.....	64	80	100
Clothing and laundry.....	50	80	150
All other expenses.....	25	50	75
Total.....	<u>\$409</u>	<u>\$556</u>	<u>\$720</u>

Students will save time and expense upon their arrival in the city by going directly to the School of Medicine on the University grounds, N. E. Corner Lombard and Greene Streets. Here may be found a list of comfortable and convenient boarding houses suitable to their means and wishes.

For further information, apply to

J. M. H. ROWLAND, *Dean*,  
Lombard and Greene Streets.

**GRADUATES, UNIVERSITY OF MARYLAND SCHOOL OF  
MEDICINE AND COLLEGE OF PHYSICIANS AND  
SURGEONS, JUNE 4, 1938**

Abarbanel, Milton G., B.S. . . . .	New Jersey	Lenker, Luther Albert, B.S. . . . .	Pennsylvania
Abramson, Daniel Jerome . . . . .	Maryland	Lipsitz, Morton Hirsch, B.S. . . . .	Maryland
Applefeld, Willard, B.S. . . . .	Maryland	Lopez, Hilton Luis . . . . .	Puerto Rico
Baum, Max, A.B. . . . .	Maryland	Lumpkin, William Randolph . . . . .	Maryland
Bonner, Robert Alexander, Jr. . . . .	Connecticut	Michaelson, Ernest . . . . .	Maryland
Borden, Melvin Nachlas, A.B. . . . .	Maryland	Milholland, Arthur Vincent, A.B. . . . .	Maryland
Bowers, John Zimmerman, B.S. . . . .	Maryland	Miller, Clarence Lee . . . . .	Missouri
Bradley, Stanley Edward, A.B. . . . .	Maryland	Miller, Royston . . . . .	Maryland
Brooks, Wilbur Starr, A.B. . . . .	New York	Miniszek, James Haight . . . . .	Maryland
Brown, Manuel . . . . .	Maryland	Molofsky, Leonard Carl . . . . .	Maryland
Bunting, John James . . . . .	New Jersey	Novey, Samuel . . . . .	Maryland
Callahan, Timothy Andrew, Jr. . . . .	Maryland	Post, Laurence Caldwell, B.S. . . . .	West Virginia
Chance, Burton, Jr. . . . .	Pennsylvania	Powell, Geraldine Kennedy, A.B. . . . .	Maryland
Cohen, Hilliard . . . . .	Maryland	Rizzolo, John, B.S. . . . .	New Jersey
Colleran, Harold Leo, B.S. . . . .	Pennsylvania	Roman, Paul, A.B. . . . .	Maryland
Coolahan, John Francis, B.S. . . . .	Maryland	Rossello, Juan Antonio . . . . .	Puerto Rico
Cooper, Donald Dwight, A.B. . . . .	Maryland	Rothkopf, Henry, B.S. . . . .	New York
Costas, Jaime Luis . . . . .	Puerto Rico	Sabatino, Bernard Joseph, A.B. . . . .	Maryland
Crawford, Robert Clifford, A.B. . . . .	Maryland	Schaefer, John Ferdinand . . . . .	Maryland
Dausch, Michael Joseph . . . . .	Maryland	Scherlis, Sidney, A.B. . . . .	Maryland
Dodd, William Anthony . . . . .	Maryland	Schlesinger, Robert Abraham . . . . .	New York
Dolman, Victor, M.S. . . . .	Pennsylvania	Schmulovitz, Maurice Jacob, A.B. . . . .	Maryland
Eichert, Arnold Herman . . . . .	Maryland	Scott, John Matthai . . . . .	Maryland
Feder, Aaron . . . . .	New York	Sevcik, Charles Vincent . . . . .	Maryland
Fox, Lester Irving, A.B. . . . .	Massachusetts	Sheppard, Robert Clay . . . . .	Maryland
Fox, Samuel Louis . . . . .	Maryland	Siegel, Edward, M.A. . . . .	New York
Gareis, Louis Calvin . . . . .	Maryland	Silberman, Donald Jared, A.B. . . . .	Alabama
George, Joseph Mathias, Jr. A.B. . . . .	Maryland	Smith, John P., A.B. . . . .	Maryland
Gertman, Samuel, A.B. . . . .	Maryland	Sprei, Emanuel, M.S. . . . .	New York
Gibel, Harry . . . . .	New York	Stein, Aaron, A.B. . . . .	Maryland
Ginsberg, Milton, A.B. . . . .	Maryland	Steinberg, Morris William . . . . .	Maryland
Glassman, Edward Lewin . . . . .	Maryland	Swiss, Adam George . . . . .	Maryland
Goodman, Louis E., Jr., A.B. . . . .	Maryland	Thomas, Bernard Oscar, B.S. . . . .	Maryland
Goodman, Sylvan Chauncey . . . . .	Maryland	Thompson, James Upshur, A.B. . . . .	Maryland
Gottdiener, Florence Hazel . . . . .	Maryland	Thompson, Winfield Lynn, B.S. . . . .	Maryland
Govons, Sidney Robert . . . . .	Maryland	Vollmer, Frederick Joseph, B.S. . . . .	Maryland
Graff, Frederick Lewis, A.B. . . . .	West Virginia	Wagner, John Alfred, B.S. . . . .	Maryland
Guyton, William Lehman . . . . .	Maryland	Warres, Herbert Leonard, B.S. . . . .	New York
Haase, John Henry . . . . .	Maryland	Way, John Edward, A.B. . . . .	North Carolina
Harris, Sidney, A.B. . . . .	New Jersey	Welfeld, Alvan Abram, A.B. . . . .	Maryland
Hayleck, Mary Lodema, A.B. . . . .	Maryland	White, Harry Fletcher, Jr. . . . .	Maryland
Horky, John Ralph . . . . .	Maryland	White, Samuel Cottrell, B.S. . . . .	Maryland
Januszkeski, Francis Joseph . . . . .	Maryland	Winer, Albert Sidney, A.B. . . . .	Maryland
Katz, Milton Aaron, A.B. . . . .	Maryland	Woodward, Theodore Englar, B.S. . . . .	Maryland
Kelmenson, Harry . . . . .	Maryland	Worthington, Richard Walker, Jr. . . . .	Maryland
Knox, John Joseph, B.S. . . . .	Pennsylvania	Wulwick, Michael, B.S. . . . .	New York
Kotleroff, Jerome, B.S. . . . .	New York	Yaffe, Kennard Levinson . . . . .	Maryland
Kump, Albert Barker, A.B. . . . .	New Jersey		
Kurtz, Gerald Independence, A.B. . . . .	New Jersey		
Lauve, Celeste Constance . . . . .	Maryland		
Layden, Milton, A.B. . . . .	Maryland		

**HONORS**

University Prize Gold Medal . . . . . STANLEY EDWARD BRADLEY



CERTIFICATES OF HONOR

AARON FEDER  
SIDNEY HARRIS

MORTON HIRSCH LIPSITZ  
EMANUEL SPREI

THEODORE ENGLAR WOODWARD

The Dr. A. Bradley Gaither Memorial Prize of \$25.00 for the best work in genito-urinary surgery during the senior year..... WILLIAM LEHMAN GUYTON

The Samuel M. Shoemaker Prize of \$25.00 for the best essay on "Milk in Relation to Public Health" written by a student in the senior class..... JEROME KOTLEROFF

DEGREES CONFERRED SEPTEMBER 15, 1937

Robert Francis Cooney..... Pennsylvania  
James Frenkil..... Maryland  
James Knox Insley, Jr., A.B..... Maryland  
Sidney Safran..... Maryland

INTERNESHIIPS—CLASS OF 1937

Abbott, Thomas Gilbert..... Mercy Hospital, Baltimore, Maryland  
Bank, R. Stanley..... Sinai Hospital, Baltimore, Maryland  
Barnett, Ernest..... Harlem Hospital, New York City  
Bereston, Eugene Sydney  
    Conemaugh Valley Memorial Hospital, Johnstown, Pennsylvania  
Brill, Leonard..... Baltimore City Hospital, Baltimore, Maryland  
Burtnick, Lester Leon..... St. Francis Hospital, Santa Barbara, California  
Carlson, Carl Edwin..... Bon Secours Hospital, Baltimore, Maryland  
Casanova Diaz, José Ramon..... Clinica Diaz Garcia, Santurce, Puerto Rico  
Christensen, Roland Arnold..... Methodist Episcopal Hospital, Philadelphia, Pennsylvania  
Cocimano, Joseph Michael..... Gallinger Municipal Hospital, Washington, D. C.  
Cooney, Robert Francis..... Moses Taylor Hospital, Scranton, Pennsylvania  
Coughlan, Stuart Gray..... University Hospital, Baltimore, Maryland  
Daily, Louis Eugene..... U. S. Naval Hospital, Philadelphia, Pennsylvania  
D' Alessio, Charles Magno..... St. Mary's Hospital, Waterbury, Connecticut  
D'Amico, Thomas Vincent..... Beth Israel Hospital, Newark, New Jersey  
Davidson, Eli..... Gouverneur Hospital, New York City  
Diggs, Everett Schnepfe..... University Hospital, Baltimore, Maryland  
Dorian, Neshon Edward..... Wilmington General Hospital, Wilmington, Delaware  
Eisner, William Monroe..... Montefiore Hospital, New York City  
Ellison, Emanuel Simon..... Baltimore City Hospital, Baltimore, Maryland  
Ensor, Helen Robinson.....  
Feldman, Philip Michael..... Beth-El Hospital, Brooklyn, New York  
Finn, John Hannon..... Baltimore City Hospital, Baltimore, Maryland  
Frenkil, James..... Gallinger Municipal Hospital, Washington, D. C.  
Frohman, Isaac..... Flower Hospital, Toledo, Ohio  
Gehlert, Sidney Richard..... Mercy Hospital, Baltimore, Maryland  
Gillespie, John Lawrence..... Mercy Hospital, Baltimore, Maryland  
Goffin, Herbert..... Meriden Hospital, Meriden, Connecticut

Goldberg, Sigmund	West Baltimore General Hospital, Baltimore, Maryland
Gordon, William Cecil	Metropolitan Hospital, Welfare Island, New York
Gore, Robert Joseph	Baltimore City Hospital, Baltimore, Maryland
Gottdiener, Elvin Edward	Lincoln Hospital, New York City
Greenwald, Frank	King's County Hospital, Brooklyn, New York
Hahn, Charles Solomon	Queens General Hospital, Jamaica, Long Island, New York
Hedrick, Grover Cleveland, Jr.	St. Agnes Hospital, Baltimore, Maryland
Highstein, Benjamin	Mercy Hospital, Altoona, Pennsylvania
Hochfeld, Leo	Beth-David Hospital, New York City
Hodgson, Eugene Welch	Uniontown Hospital, Uniontown, Pennsylvania
Hoffman, Charles Wilbur, Jr.	Church Home & Infirmary, Baltimore, Maryland
Humphries, William Coolidge	Baltimore City Hospital, Baltimore, Maryland
Insley, James Knox, Jr.	Maryland General Hospital, Baltimore, Maryland
Jackson, Samuel	Gouverneur Hospital, New York City
Jacobson, Isadore Alan	Wilmington General Hospital, Wilmington, Delaware
Johnston, Clarence Frederick, Jr.	Maryland General Hospital, Baltimore, Maryland
Jones, James Porter	Mercy Hospital, Baltimore, Maryland
Kadan, James Earl	Baltimore City Hospital, Baltimore, Maryland
Kagen, Gordon Arthur	Reading Hospital, Reading, Pennsylvania
Kaltreider, D. Frank Olewiler, Jr.	University Hospital, Baltimore, Maryland
Kaplan, Isadore	Windber Hospital, Windber, Pennsylvania
Kaplan, Jack Allen	Jersey City Medical Center, Jersey City, New Jersey
Kaplan, Nathan	St. Joseph's Hospital, Joliet, Illinois
Katz, Albert Herbert	Charleston General Hospital, Charleston, West Virginia
Katz, Isadore	Beth-El Hospital, Brooklyn, New York
Kemick, Irvin Bernard	St. Joseph's Hospital, Fort Wayne, Indiana
Klemkowski, Irvin Philip	Maryland General Hospital, Baltimore, Maryland
Kolman, Lester Norman	Illinois Masonic Hospital, Chicago, Illinois
Kunkowski, Mitchell Frank	St. Joseph's Hospital, Baltimore, Maryland
Leskin, Louis Woron	Beth-David Hospital, New York City
Levine, Leonard Warren	University Hospital, Baltimore, Maryland
Levinson, Leonard Jules	Jewish Hospital of Brooklyn, Brooklyn, New York
Linhardt, Elmer George	St. Agnes Hospital, Baltimore, Maryland
Lisansky, Ephraim Theodore	Mercy Hospital, Baltimore, Maryland
Long, William Broughton, Jr.	University Hospital, Baltimore, Maryland
Lubinski, Chester James	Bon Secours Hospital, Baltimore, Maryland
Mackowiak, Stephen Casimir	South Baltimore General Hospital, Baltimore, Maryland
Manieri, Frank Vincent	South Baltimore General Hospital, Baltimore, Maryland
Marino, Irene Thelma	St. James Hospital, Newark, New Jersey
Matheke, Otto George, Jr.	Newark City Hospital, Newark, New Jersey
Meyer, Milton Joseph	Cumberland Hospital, Brooklyn, New York
Muller, Stephen Edwin	Mercy Hospital, Baltimore, Maryland
Muse, Joseph Ennalls	St. Agnes Hospital, Baltimore, Maryland
Myers, Philip	Lawrence and Memorial Associated Hospital, New London, Connecticut
Nataro, Maurice	St. Mary's Hospital, Orange, New Jersey
Owens, Richard Spurgeon, Jr.	University Hospital, Baltimore, Maryland
Pass, Isidore Earl	Chester Hospital, Chester, Pennsylvania
Pavlatos, August Constantine	Lancaster General Hospital, Lancaster, Pennsylvania
Perlman, Lawrence	Illinois Masonic Hospital, Chicago, Illinois
Piccolo, Pasquale Albert	Grace Hospital, New Haven, Connecticut

Pokrass, Frederick Phillip.....St. Joseph's Hospital, Reading, Pennsylvania  
 Resnick, Elton.....South Baltimore General Hospital, Baltimore, Maryland  
 Revell, Samuel Thompson Redgrave, Jr....University Hospital, Baltimore, Maryland  
 Rigdon, Henry Lewis.....University Hospital, Baltimore, Maryland  
 Robins, Isadore Morris..Wilkes-Barre General Hospital, Wilkes-Barre, Pennsylvania  
 Robinson, Martin Herman.....Northeastern Hospital, Philadelphia, Pennsylvania  
 Rochkind, Reuben.....Sinai Hospital, Baltimore, Maryland  
 Roseman, Ephraim.....Baltimore City Hospital, Baltimore, Maryland  
 Rubin, Morris.....Beth-Israel Hospital, New York City  
 Rudman, Gilbert Elmore.....St. Joseph's Hospital, Baltimore, Maryland  
 Safran, Sidney.....Washington Hospital, Washington, Pennsylvania  
 Sakowski, John Paul.....Bayonne Hospital & Dispensary, Bayonne, New Jersey.  
 Sartorius, Norman Ellis, Jr.....Maryland General Hospital, Baltimore, Maryland  
 Scarborough, Clarence Parke, Jr....Maryland General Hospital, Baltimore, Maryland  
 Schmidt, Jacob Edward.....Sinai Hospital, Baltimore, Maryland  
 Seegar, John King Beck Emory, Jr.....University Hospital, Baltimore, Maryland  
 Seidel, Joshua.....Sinai Hospital, Baltimore, Maryland  
 Semoff, Milton C. F.....Highsmith Hospital, Fayetteville, North Carolina  
 Sewall, Sydney.....Hartford Municipal Hospital, Hartford, Conn.  
 Shapiro, Abraham.....Sinai Hospital, Baltimore, Maryland  
 Shear, Meyer Robert.....Hahneman Hospital, Scranton, Pennsylvania  
 Spielman, Morton Marvin.....Sinai Hospital, Baltimore, Maryland  
 Stapen, Mannie.....Beth-Moses Hospital, Brooklyn, New York  
 Statman, Bernhardt Joseph.....Newark City Hospital, Newark, New Jersey  
 Steiner, Albert.....Hospital of St. Vincent de Paul, Norfolk, Virginia  
 Sullivan, Thomas John.....Mercy Hospital, Baltimore, Maryland  
 Trupp, Mason.....Piedmont Hospital, Atlanta, Georgia  
 Weems, George Jones.....Maryland General Hospital, Baltimore, Maryland  
 Weiss, Henry Wolfe.....Maryland General Hospital, Baltimore, Maryland  
 Whitworth, Frank Dixon.....Church Home & Infirmary, Baltimore, Maryland  
 Wilkin, Mabel Giddings...Hospital for the Women of Maryland, Baltimore, Maryland  
 Williams, Richard Jones.....Maryland General Hospital, Baltimore, Maryland  
 Williams, Robert Roderic.....Baltimore City Hospital, Baltimore, Maryland  
 Wolff, Eldridge Henry.....Baltimore City Hospital, Baltimore, Maryland  
 Woodrow, Jack Henry.....Yonkers General Hospital, Yonkers, New York  
 Zack, Frank Anthony.....Mercy Hospital, Baltimore, Maryland  
 Zeligman, Israel.....Windber Hospital, Windber, Pennsylvania

MATRICULATES

FOURTH YEAR CLASS 1937-38

Abarbanel, Milton, G., B.S.....New Jersey	Brown, Manuel.....Maryland
Abramson, Daniel Jerome.....Maryland	Bunting, John James.....New Jersey
Applefeld, Willard, B.S.....Maryland	Callahan, Timothy Andrew, Jr..Maryland
Baum, Max, A.B.....Maryland	Chance, Burton, Jr.....Pennsylvania
Bonner, Robert Alexander, Jr.	Cohen, Hilliard.....Maryland
Connecticut	Colleran, Harold Leo, B.S...Pennsylvania
Borden, Melvin Nachlas, A.B...Maryland	Coolahan, John Francis, B.S...Maryland
Bowers, John Zimmerman, B.S.Maryland	Cooper, Donald Dwight, A.B...Maryland
Bradley, Stanley Edward, A.B.Maryland	Costas, Jaime Luis.....Puerto Rico
Brooks, Wilbur Starr, A.B.....New York	Crawford, Robert Clifford, A.B.Maryland

Dausch, Michael Joseph.....	Maryland	Molofsky, Leonard Carl.....	Maryland
Dodd, William Anthony.....	Maryland	Novoy, Samuel.....	Maryland
Dolfman, Victor, M.S.....	Pennsylvania	Post, Laurence Caldwell, B.S.	West Virginia
Eichert, Arnold Herman.....	Maryland		
Feder, Aaron.....	New York	Powell, Geraldine Kennedy, A.B.	Maryland
Fox, Lester Irving, A.B.....	Massachusetts	Rizzolo, John, B.S.....	New Jersey
Fox, Samuel Louis.....	Maryland	Roman, Paul, A.B.....	Maryland
Gareis, Louis Calvin.....	Maryland	Rossello, Juan Antonio.....	Puerto Rico
George, Joseph Mathias, Jr., A.B.	Maryland	Rothkopf, Henry, B.S.....	New York
		Sabatino, Bernard Joseph, A.B.	Maryland
Gertman, Samuel, A.B.....	Maryland	Sarajian, Aram Martyr, A.B.	New Jersey
Gibel, Harry.....	New York	Schaefer, John Ferdinand.....	Maryland
Ginsberg, Milton, A.B.....	Maryland	*Schammel, Adam John.....	Maryland
Glassman, Edward Lewin.....	Maryland	Scherlis, Sidney, A.B.....	Maryland
Goodman, Louis E., Jr., A.B.	Maryland	Schlesinger, Robert Abraham.....	New York
Goodman, Sylvan Chauncey.....	Maryland	Schmulovitz, Maurice Jacob, A.B.	Maryland
Gottdiener, Florence Hazel.....	Maryland		
Govons, Sidney Robert.....	Maryland	Scott, John Matthai.....	Maryland
Graff, Frederick Lewis, A.B.	West Virginia	Sevcik, Charles Vincent.....	Maryland
Guyton, William Lehman.....	Maryland	Sheppard, Robert Clay.....	Maryland
Haase, John Henry.....	Maryland	Siegel, Edward, M.A.....	New York
Harris, Sidney, A.B.....	New Jersey	Silberman, Donald Jared, A.B.	Alabama
Hayleck, Mary Lodema, A.B.....	Maryland	Smith, John P., A.B.....	Maryland
Horky, John Ralph.....	Maryland	Sprei, Emanuel, M.S.....	New York
Januszeski, Francis Joseph.....	Maryland	Stein, Aaron, A.B.....	Maryland
Katz, Milton Aaron, A.B.....	Maryland	Steinberg, Morris William.....	Maryland
Kelmenson, Harry.....	Maryland	Swiss, Adam George.....	Maryland
Knox, John Joseph, B.S.....	Pennsylvania	Thomas, Bernard Oscar, B.S.....	Maryland
Kotleroff, Jerome, B.S.....	New York	Thompson, James Upshur, A.B.	Maryland
Kump, Albert Barker, A.B.....	New Jersey	Thompson, Winfield Lynn, B.S.	Maryland
Kurtz, Gerald Independence, A.B.	New Jersey	Vollmer, Frederick Joseph, B.S.	Maryland
		Wagner, John Alfred, B.S.....	Maryland
Lauve, Celeste Constance.....	Maryland	Warres, Herbert Leonard, B.S.	New York
Layden, Milton, A.B.....	Maryland	Way, John Edward, A.B.....	North Carolina
Lenker, Luther Albert, B.S.	Pennsylvania	Welfeld, Alvan Abram, A.B.....	Maryland
Lipsitz, Morton Hirsch, B.S.....	Maryland	White, Harry Fletcher, Jr.....	Maryland
Lopez, Hilton Luis.....	Puerto Rico	White, Samuel Cottrell, B.S.....	Maryland
Lumpkin, William Randolph.....	Maryland	Winer, Albert Sidney, A.B.....	Maryland
Michaelson, Ernest.....	Maryland	Woodward, Theodore Englar, B.S.	Maryland
Miltholland, Arthur Vincent, A.B.	Maryland		
		Worthington, Richard Walker, Jr.	Maryland
Miller, Clarence Lee.....	Missouri		
Miller, Royston.....	Maryland	Wulwick, Michael, B.S.....	New York
Miniszek, James Haight.....	Maryland	Yaffe, Kennard Levinson.....	Maryland

## THIRD YEAR CLASS 1937-38

Baylus, Herman.....	Maryland	Cohen, Frank Samuel.....	Maryland
Beck, Harry McBrine, A.B.....	Maryland	Corbitt, Richard Wylie, A.B.	West Virginia
Berman, Edgar Frank.....	Maryland		
Bernstein, Aaron.....	Maryland	Cunningham, Raymond Murray, A.B.	Maryland
Bernstein, Albion Older, B.S.....	New York		
Bess, Elizabeth Grant, A.B.	West Virginia	Filtzer, David Leonard, A.B.....	Maryland
Bloom, Max Ralph, B.S.....	Pennsylvania	Freed, Arnold Ulysses.....	Maryland
Brezinski, Edward Joseph, A.B.	New Jersey	Fusting, William Hammond, B.S.	Maryland
Briele, Henry Alison.....	Maryland	Gaver, Leo Junior.....	Maryland
Brodsky, Bernard, A.B.....	New York	Goldberg, Sylvan David.....	Maryland
Cannon, Lawrence Saville, A.B.....	Utah	*Gray, Thomas Burke, B.S.	North Carolina
Cianos, James Nicholas, B.S.....	Maryland		
Coffman, Robert Thornhill.....	West Virginia	Grier, George Smith III, B.S.	Delaware

\* Did not complete the year.

- Grott, Harold Allan . . . . . Maryland  
 Haimowitz, Samuel Isaac, A.B.  
     Pennsylvania  
 Harris, Charles Isaac, Jr., B.S. . . . . Georgia  
 Harrison, Charles Samuel, B.S.  
     West Virginia  
 Hartman, Oscar . . . . . Maryland  
 Hartz, Alvin Sidney, A.B. . . . . Maryland  
 Heimoff, Leonard Lincoln, A.B. . . . . New York  
 Hooker, Charles Bullard, B.S. . . . . Maryland  
 Hutchins, Thomas Manning . . . . . Maryland  
 Isaacson, Benjamin . . . . . Maryland  
 \*Jamison, William Parks, B.S.  
     West Virginia  
 Jandorf, R. Donald, A.B. . . . . Maryland  
 Jannarone, Lewis Henry, B.S. . . . . New Jersey  
 Jones, Charles Wilson, A.B. . . . . Maryland  
 Jorgensen, Louis Cecil, A.B. . . . . Utah  
 Kairys, David, A.B. . . . . Maryland  
 Kammer, William Henry, Jr., A.B.  
     Maryland  
 Kappelman, Melvin Daniel . . . . . Maryland  
 Keister, Philip Weyforth, A.B. . . . . Maryland  
 Kerr, James Patterson, Jr. . . . . Maryland  
 Kieley, James Arthur, A.B. . . . . New York  
 Kinnamon, Howard Franklin, Jr.  
     Maryland  
 Kleiman, Bernard Stanley . . . . . Maryland  
 Kurland, Albert Alexander . . . . . Maryland  
 Kyle, Henry Hall . . . . . Maryland  
 Lapinsky, Herbert, M.S. . . . . New York  
 Lavenstein, Arnold Fabian, A.B.  
     Maryland  
 Layman, William Templeton . . . . . Maryland  
 Leitch, William Harvey, B.S. . . . . Maryland  
 Magness, Stephen Lee, A.B. . . . . Maryland  
 Magruder, John Robinson, A.B. . . . . Maryland  
 Marks, Irving Lowell . . . . . Maryland  
 McClafferty, William James, Jr., A.B.  
     Rhode Island  
 McLaughlin, Francis Joseph . . . . . Maryland  
 Meyer, Alvin Francis, B.S. . . . . New York  
 Miller, Irving, B.S. . . . . New York  
 Miller, William Shepherd, A.B. . . . . Maryland  
 Moran, John Anthony . . . . . Massachusetts  
 Moricle, Charles Hunter, B.S.  
     North Carolina  
 Nuttall, James Baker . . . . . Maryland  
 Palmer, David Waugh . . . . . West Virginia  
 Parks, Seigle Wilson, A.B. . . . . West Virginia  
 Pijanowski, Walter Joseph, B.S. . . . . New York  
 Pillar, Samuel, B.S. . . . . Maryland  
 Polek, Melvin Frank, B.S. . . . . Maryland  
 Reimann, Dexter LeRoy . . . . . Maryland  
 Rochberg, Samuel, B.S. . . . . New Jersey  
 Ruzicka, Edwin Russell, B.S. . . . . Maryland  
 Sadove, Max Samuel . . . . . Maryland  
 Schenthal, Joseph Edwin, A.B. . . . . Maryland  
 Scher, Isadore . . . . . Maryland  
 Sexton, Thomas Scott, A.B. . . . . West Virginia  
 Sherman, Claude Porter, B.S.  
     North Carolina  
 Siegel, Maurice Bert, A.B. . . . . New York  
 Smoak, Philip Laurens . . . . . Florida  
 Solarz, Sylvan Daniel, A.B. . . . . Maryland  
 Spiegel, Herbert, B.S. . . . . Pennsylvania  
 Steger, William Joseph, A.B.  
     West Virginia  
 Stevens, Leland Bates, B.S. . . . . Maryland  
 Tartikoff, George, B.S. . . . . New York  
 Thomas, Ramsay Berry, B.S. . . . . Maryland  
 Thomas, Wilbur Clyde, B.S. . . . . Maryland  
 Urlock, John Peter, Jr. . . . . Maryland  
 Wallenstein, Leonard, A.B. . . . . Maryland  
 Wanner, Jesse Rosenberger, Jr. . . . . Maryland  
 Whitworth, Fuller Barnard . . . . . Maryland  
 Wilder, Milton Jay . . . . . Maryland  
 Wilner, Sol, M.S. . . . . New York  
 Worsley, Thomas Luther, Jr., B.S.  
     North Carolina  
 Zalis, Daniel Leonard . . . . . Maryland

SECOND YEAR CLASS 1937-38

- Andrews, S. Ralph, Jr., A.B. . . . . Maryland  
 Baier, John Cletus . . . . . Maryland  
 Bailey, Walter Levi, A.B. . . . . Pennsylvania  
 Barker, Daniel Cleveland, A.B.  
     Connecticut  
 Beacham, Edmund George, B.S. . . . . Maryland  
 Biehl, Harold Paul, A.B. . . . . Maryland  
 Borden, Jesse Nachlas, A.B. . . . . Maryland  
 Brinsfield, Irving Carlton, A.B. . . . . Maryland  
 Caplan, Lester Harold, A.B. . . . . Maryland  
 Clifford, Robert Henry, Jr., B.S.  
     New Jersey  
 Cole, John Totterdale . . . . . Ohio  
 Correll, Paul Harvey, A.B. . . . . Maryland  
 Daue, Edwin Oliver, Jr., B.S. . . . . Maryland  
 De Luca, Joseph, B.S. . . . . Rhode Island  
 Don Diego, Leonard Vincent, B.S.  
     New York  
 Duffy, William Carroll, A.B. . . . . Maryland  
 Dwyer, James Richard, B.S. . . . . Pennsylvania  
 Freeman, James Albert, Jr.  
     West Virginia  
 Gassaway, William Farrow . . . . . Maryland  
 Glick, Irving Van der Veere, A.B.  
     New York  
 Graham, Walter Raleigh, A.B.  
     North Carolina  
 Guzman-Lopez, Luis Roberto . . . . . Puerto Rico  
 Hecht, Morton, Jr., B.S. . . . . Maryland  
 Henning, Emil Heller, Jr. . . . . Maryland  
 Heyman, Albert . . . . . Maryland  
 Hooton, Elizabeth Louise, B.S. . . . . Maryland  
 Hope, Daniel, Jr. . . . . Maryland  
 Igartua-Cardona, Susana . . . . . Puerto Rico  
 Inloes, Benjamin Harrison, Jr. . . . . Maryland  
 Johnson, Robert Dunston, A.B. . . . . Maryland

\* Did not complete the year.

- Karns, James Roscoe. . . . . Maryland  
 Kirchick, Julian Gilbert, A.B. . . . . New York  
 Kohn, Schuyler George, B.S. . . . . Maryland  
 Krieg, Edward Franz. . . . . Maryland  
 Lartz, Robert Eshelman, B.S.  
     Pennsylvania  
 Ling, William Soy Ming, A.B. . . . . China  
 Livingood, William Cook, B.S.  
     Pennsylvania  
 Loker, Frank Ford, B.S. . . . . Maryland  
 Maccubbin, Harry Pearce, B.S. . . . . Maryland  
 Markline, Simeon VanTrump, A.B.  
     Maryland  
 Martin, Clarence Wilbur. . . . . Maryland  
 Maryanov, Alfred Richard. . . . . New York  
 Mathers, Daniel Hutchinson, A.B.  
     Maryland  
 McClung, James Edward, A.B.  
     West Virginia  
 McClung, William Dennis. . . . . West Virginia  
 McDaniel, George Croxton, A.B.  
     Maryland  
 McKinnon, William James, A.B.  
     North Carolina  
 Meade, Forest Chauncey. . . . . Maryland  
 Miceli, Joseph, A.B. . . . . Maryland  
 Molz, Edward Louis, B.S. . . . . Maryland  
 Murphy, Frederick Elbert, Jr., A.B.  
     Georgia  
 Muse, William Travers, B.S. . . . . Maryland  
 Myers, George Roger, Jr., A.B. . . . . Maryland  
 O'Hara, James Francis, B.S. . . . . Ohio  
 Pico, Guillermo. . . . . Puerto Rico  
 Pierpont, Ross Zimmerman. . . . . Maryland  
 Pigford, Robert Toms. . . . . North Carolina  
 Platt, William. . . . . Maryland  
 Pollock, Arthur Edgar, B.S. . . . . Pennsylvania  
 Posner, Leonard, B.S. . . . . New York  
 Pound, John Costello, A.B. . . . . Maryland  
 Rath, Maurice Monroe, A.B. . . . . New Jersey  
 Rhode, Charles Martin, A.B. . . . . Maryland  
 Richter, Conrad Louis. . . . . Maryland  
 Robinson, Raymond Clarence Vail  
     Maryland  
 Roop, Donald James, A.B. . . . . Maryland  
 Rothschild, Carl Eliot, B.S. . . . . China  
 Russell, Thomas Edgie, Jr., B.S. . . . . Maryland  
 Russillo, Philip Joseph, A.B. . . . . Connecticut  
 Schlesinger, George Gerard, B.S.  
     New York  
 Sloan, Joseph Wright, B.S. . . . . New Jersey  
 Smith, James Brady, B.S. . . . . Maryland  
 Squillante, Orlando John, B.S.  
     Rhode Island  
 Stayton, Howard Nehemiah, Jr., A.B.  
     Delaware  
 Supik, William Joseph. . . . . Maryland  
 Tankin, Louis Haberer, A.B. . . . . Maryland  
 Thompson, Alexander Frank, A.B.  
     North Carolina  
 Thompson, Raymond Kief, B.S. . . . . Maryland  
 Tompakov, Samuel, A.B. . . . . Maryland  
 Townshend, Wilfred, Henry, Jr., A.B. . . . . Maryland  
 Trevor, William, A.B. . . . . Maryland  
 Triplett, William Carryl. . . . . West Virginia  
 Waite, Merton Theodore. . . . . Maryland  
 Wilkins, Jesse Lee, B.S. . . . . Maryland  
 Williams, Herman Joseph, B.S.  
     Pennsylvania  
 Williams, Richard Talbot, A.B. . . . . Maryland  
 Wilson, Harry Thomas, Jr. . . . . Maryland  
 Wolf, William Irwin, B.S. . . . . New York  
 Zinkin, Solomon Bernard, A.B.  
     New Jersey

## FIRST YEAR CLASS 1937-38

- Alberti, Aurora Frances, A.B. . . . . New York  
 Alexander, Fred, A.B. . . . . New Jersey  
 Barnett, Charles Phelps, A.B. . . . . Maryland  
 Baxley, Joshua Warfield III, B.S.  
     Maryland  
 Bowen, Joseph John. . . . . Connecticut  
 Brooks, Julius Culpepper, Jr., B.S.  
     Tennessee  
 Bundick, William Ross. . . . . Maryland  
 Checket, Pierson Melvin, A.B. . . . . Maryland  
 Chiques, Carlos Miguel. . . . . Puerto Rico  
 Cooper, LeRoy Gerald, A.B.  
     Pennsylvania  
 Crecca, Joseph Vincent, B.S. . . . . New Jersey  
 Croce, Gene Albert, B.S. . . . . Rhode Island  
 Cruikshank, Dwight Phelph, Jr., A.B.  
     West Virginia  
 Culler, John McCleary, A.B. . . . . Maryland  
 deVincentis, Michael Louis, B.S. . . . . Maryland  
 Diez-Gutierrez, Emilio. . . . . Puerto Rico  
 DiPaula, Anthony Francis, A.B. . . . . Maryland  
 Esnard, John Edward. . . . . California  
 Evola, Camille Mary, A.B. . . . . New York  
 Figge, Frank Henry John, A.B. . . . . Maryland  
 Frey, Edward Leonard, Jr., A.B. . . . . Maryland  
 Garcia-Blanco, Jose. . . . . Puerto Rico  
 Gelber, Julius, A.B. . . . . New York  
 Goodman, William, A.B. . . . . Maryland  
 Graziano, Theodore Joseph, A.B.  
     Maryland  
 Hedrick, Thomas Ardis. . . . . West Virginia  
 Hershner, Newton Webster, Jr., B.S.  
     Pennsylvania  
 Hollander, Asher, A.B. . . . . Maryland  
 Hunter, James Stanley, Jr. . . . . Maryland  
 Jaffe, Vita Rebecca, B.S. . . . . New York  
 \*Jordan, Gordon Thomas, B.S., A.B.  
     West Virginia  
 Kemp, Norval Foard, A.B. . . . . Maryland  
 Kiefer, Robert Allan, A.B. . . . . Maryland

\* Did not complete the year.

Krulevitz, Keaciel Kenneth, B.S.	Maryland
Lach, Frank Edward, B.S.	New Jersey
Leslie, Franklin Earl, A.B.	Maryland
Levinson, Lorman Leon, A.B.	Maryland
Licha, Jose Salomon	Puerto Rico
Lowe, William Cook	Maryland
Lusby, Thomas Frank, A.B.	Maryland
Mandel, Jacob Barry, M.S.	New Jersey
Martinez, Josefina, B.S.	Puerto Rico
Matthews, Henry Steadman, A.B.	North Carolina
McBrayer, John Albert, Jr., B.S.	North Carolina
Mitchell, William Arthur	Maryland
Molinari, Jose Gilberto	Puerto Rico
Montgomery, Mark Reed	Pennsylvania
Morris, Felix Raymond	Connecticut
Morrison, William Herbert	Maryland
Nolan, James Joseph, B.S.	Maryland
Novoa-Caballero, Miguel	Puerto Rico
Ortiz, Idalia Ortiz, B.S.	Puerto Rico
Palmer, Margaret Virginia, M.A.	Maryland
Pasamanick, Benjamin, A.B.	New York
Pearcy, Thompson	West Virginia
Perman, Joshua Melvin, A.B.	Maryland
Pruitt, Charles Eugene, A.B.	Maryland
Renna, Francis Stanley, A.B.	New Jersey
Revell, Walter Jones, B.S.	Georgia
Richardson, Charles, Jr.	Maryland
Richmond, Marion Ballard, B.S.	Maryland
Richter, Christian Frederick, Jr., B.S.	Maryland
Rosenberg, Jonas Samuel, A.B.	New York
Rossberg, Clyde Arthur, A.B.	Maryland
Sasscer, Robert Bowie, A.B.	Maryland
Sawyer, William Hamilton, A.B.	North Carolina
Schwartz, Stanley Eugene, B.S.	New York
Seigman, Edwin Lincoln, Jr., A.B.	Maryland
Shannon, Edward Patrick, Jr., B.S.	New York
Sheehan, Joseph Chester, B.S.	Maryland
Sherrill, Elizabeth Brown	Maryland
Spencer, Tracy Neil, Jr., A.B.	North Carolina
Spinnler, Henry Robert, B.S.	New Jersey
Stevens, John Sutehall, A.B.	Connecticut
Strayer, Webster Mills, Jr., A.B.	Maryland
Traynor, Francis Willoughby, B.S.	Maryland
Trevaskis, Richard White, A.B.	Maryland
*Trumper, Eleanor Jessamine, A.B.	Alabama
Ulrich, George John, A.B.	Maryland
Vest, William Joseph	West Virginia
Virusky, Edmund Joseph, B.S.	Pennsylvania
Walker, James Haward, A.B.	West Virginia
Wall, Lester Aubrey, Jr., A.B.	Maryland
Ward, Charles Monroe, B.S.	West Virginia
Watkins, Dayton O'Lander, B.S.	Maryland
Wells, John Bernard, Jr., B.S.	Maryland
Wilder, Thomas Carroll	Minnesota
Wilson, Edwin Forrest, A.B.	New York
Yanagisawa, Kazuo, A.B.	California
Young, John David, Jr.	Maryland
Zierler, Kenneth Levie, A.B.	Maryland

\*Did not complete the year.

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laboratories, gymnasium, scholarship, medal, prize, etc., in which case the wishes of the donor will be strictly regarded. Attention is invited to the "Charles Frick Research Fund," already established in memory of that distinguished investigator. Checks should be made payable to Endowment Fund of the University of Maryland, J. M. H. Rowland, Treasurer, Lombard and Greene Streets, Baltimore, Md.

FORMS OF DEVISE OR BEQUEST

TO SCHOOL OF MEDICINE

I give, devise and bequeath to the Regents of the University of Maryland, a corporation incorporated under the laws of the State of Maryland, for the benefit of the Faculty of Physic.....

(Here state amount or describe property)

TO ENDOWMENT FUND

I give, devise and bequeath to the Trustees of the Endowment Fund of the University of Maryland, a corporation incorporated under the laws of the State of Maryland, for the benefit of the Faculty of Physic.....

(Here state amount or describe property)

THE UNIVERSITY OF MARYLAND SCHOOL OF NURSING

The University of Maryland School for Nurses was established in the year 1889. Since that time it has been an integral part of the University of Maryland, coming under the same government. It is a non-sectarian school, the only religious services being morning prayers.

The University Hospital is a general hospital containing about 400 beds. It is equipped to give young women a thorough course of instruction and practice in all phases of nursing.

Programs Offered: The programs of study of the school are planned for two groups of students: (a) the five-year group, (b) the three-year group.

The requirements for admission to the five-year program of the School of Nursing are the same as for other colleges of the University. The completion of this course entitles the student to the degree of Bachelor of Science from the University of Maryland and to the diploma of the University Hospital School of Nursing.

The requirements for admission to the three year program are the satisfactory completion of an academic course in an approved high school. The completion of this course entitles the student to the diploma of the University of Maryland School of Nursing. Blank certificates will be furnished upon application to the Director of the School of Nursing.

### MERCY HOSPITAL SCHOOL OF NURSING

The Mercy Hospital School of Nursing was established in 1899 and incorporated on December 23, 1901. It has developed the art of the profession according to the high standard necessary to qualify as a Registered Nurse.

The rapid growth of the institution, attested by the increasing number of its graduates, is evidence of the active part it takes in the health of the community. Through its connection with the Mercy Hospital its opportunities are unlimited. By its affiliation with the University of Maryland it has the advantage of the best professors for the instruction of the nurses.

The University of Maryland, in affiliation with the Mercy Hospital School of Nursing, offers a five year combined Academic and Nursing program. The completion of this course entitles the student to the degree of Bachelor of Science from the University of Maryland, and to the diploma of the Mercy Hospital School of Nursing. Graduate nurses who hold college degrees are greatly in demand, especially for positions in administration and teaching institutions. This program consequently offers a distinct advantage.

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