MEDICAL AXIOMS, APHORISMS AND CLINICAL MEMORANDA

J. A. LINDSAY

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AND CLINICAL MEMORANDA

BY

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STUDENTS OF THE BELFAST MEDICAL SCHOOL

PAST AND PRESENT

THIS VOLUME IS DEDICATED

PREFACE
TO SECOND IMPRESSION

THE gratifying reception of this work having rendered a second impression necessary, the opportunity has been taken of adding a few new axioms and aphorisms, and of omitting or amending a few others.

The author desires to thank many correspondents at home and abroad for friendly criticisms and helpful suggestions.

BELFAST,
September, 1923

PREFACE

MANY of the following Medical Axioms, Aphorisms, and Clinical Memoranda have been familiar to several generations of students of the Belfast Medical School. They are now published in response to many requests, in the hope that they may prove of usefulness to a wider circle.

The author desires to acknowledge the valuable help afforded by Dr. S. I. Turkington in the preparation of this volume.

BELFAST,
1923.

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MEDICAL AXIOMS, APHORISMS, AND CLINICAL MEMORANDA

I.—GENERAL

1. Life is short, the Art is long, occasion sudden, judgment difficult. Neither is it sufficient that the physician do his office, unless the patient and his attendants do their duty, and that externals are likewise well ordered.—*Hippocrates.*

2. The physician should possess the following qualities: learning, wisdom, humanity, probity. —*Hippocrates.*

3. The nature of the body can only be understood as a whole.—*Hippocrates.*

4. To the love of his profession the physician should add a love of humanity.—*Hippocrates.*

5. Whoever is desirous of prosecuting his medical studies on a right plan must pay a good deal of attention to the different seasons of the year and their respective influence.—*Hippocrates.*

6. Neither hunger nor satiety, nor anything that exceeds the natural bounds, can be good or healthful.—*Hippocrates.*

7. Old men easily endure fasting; those who are middle-aged not so well; young men worse than these; and children worst of all, especially those who are of a more lively spirit.—*Hippocrates.*

8. Hippocrates said he must needs succeed well in cures that considers and understands such things as are common and proper.—*Celsus*

9. It is not to be imagined that he should know the remedies of diseases who knows not their original causes.—*Celsus.*

10. We ought not to be ignorant that the same remedies are not good for all.—*Celsus.*

11. Laziness slackens and dulls the body, but labour strengthens and makes it firm. The former hastens old age; the other prolongs youth.—*Celsus.*

12. Idleness and luxury first corrupted men's bodies in Greece, and afterwards afflicted them in Rome.—*Celsus.*

13. Rest and abstinence are the best of all remedies, and abstinence alone cures without any danger.—*Celsus.*

14. Physic is not always good for the sick, but it is always hurtful to the healthy.—*Celsus.*

15. *Mors denuntiatur ubi æger supinus cubat eique genua contracta sunt.—Celsus.*

16. *Homines ad deos nullâ in re propius accedunt quam salutem hominibus dando.—Cicero.*

17. *Differunt pro naturâ locorum genera medicinæ.—Galen.*

18. The best physician is also a philosopher.—*Galen.*

19. *Si tibi deficiant medici : medici tibi fiant*
Hæc tria—Mens hilaris, requies, moderata diæta. *A Motto of Salerno.*

20. *Science sans expérience n'apporte pas grande assurance.—Ambroise Paré.*

21. *Je le pansai; Dieu le guérit.—Ambroise Paré.*

22. Wisdom is the daughter of experience.—*Leonardo da Vinci.*

23. The sick should be the doctor's books.—*Paracelsus.*

24. *Experientia magistra medicorum.—Sydenham.*

25. *Qui mundificat bene, bene sanat.—Sydenham.*

26. Nevertheless, I have always thought it a greater happiness to discover a certain remedy for even the slightest disease than to accumulate even the largest fortune, and whoever compasses the former I esteem not only happier, but wiser and better too.—*Sydenham.*

27. Let me be sick myself if sometimes the malady of my patient be not a disease to me.—*Sir Thomas Browne.*

28. *Il n'y a pas de maladies : il n'y a que des malades.—Trousseau.*

29. *Il faut toujours voir, toujours voir des malades.—Trousseau.*

30. *Soulager est le but que doit toujours se proposer le médecin quand il ne peut pas guérir.—Trousseau.*

31. *Ars medica tota in observationibus.—Louis.*

32. The speed of life is not the same for all.—*Paget.*

33. Living to old age "goes in families"; and so does dying before old age.—*Paget.*

34. I am sure of this: that as the justly successful members of our profession grow older and probably wiser, they more and more guide themselves by the study of their patient's constitution, learning more of family histories, and detecting constitutional diseases more skilfully in signs which to others seem trivial.—*Paget.*

35. The brain is like a wealthy gentleman with many servants, and he may be badly served by any of them.—*Gull.*

36. Health is that state of mind in which the body is not consciously present to us; the state in which work is easy and duty not too great a trial; the state in which it is a joy to see, to think, to feel, to be.—*Andrew Clark.*

37. Never believe what a patient tells you his doctor has said.—*William Jenner.*

38. Every righteous physician regards his practice as a social service, a means not only of bodily but also of social reconstruction and of moral and intellectual health.—*Clifford Allbutt.*

39. A sane mind consists in a good digestion of experience.—*Clifford Allbutt.*

40. Man is a social animal, and all disease has its social aspect. The student must learn to use his stock of knowledge socially as well as logically —*George Newman.*

41. The best physician is the most conscious of the limitations of his art.—*Benjamin Jowett.*

42. The great and good physician who has had a long career has a happiness in looking back over his life which no other man can rival. He at least has done positive good, relieved suffering, restored strength, and renewed hope.—*C. E. Norton.*

43. To be a good practitioner of medicine requires that the doctor possess not only technical knowledge and skill, but also a broad, sympathetic, tolerant conception of life.—*J. Lorrain Smith.*

44. It was said of Syme that he never wasted a word or a drop of blood.

45 The first qualification for a physician is hopefulness.—*James Little.*

46. Every medical student should remember that his end is not to be made a chemist, or a physiologist, or an anatomist, but to learn how to recognise and treat disease, to become a practical physician.—*W. Osler.*

47. There are many conditions in which the cure must come from within, our function in chief being to call out this dormant power.—*Goodhart.*

48. Medicine is an art, but it is an art which is always trying to become a science.

49. Attack disease at its beginnings—*obsta principiis.*

50. Few studies are more instructive, more full of warning, or more generally neglected than the study of the history of medicine.

51. Nature is a good physician but a bad surgeon.

52. Extreme specialism was one of the causes of the decay of medicine in Ancient Egypt.

53. Think of common diseases first.

54. "Queer cases" are usually abnormal types of common conditions.

55. In searching for the obscure, do not overlook the obvious.

56. Remember that many symptoms are part of Nature's defensive mechanisms.

57. In dealing with disease, think of disordered function as much as of damaged structure.

58. It is rarely permissible to base a diagnosis upon a single sign.

59. For one mistake made for not knowing, ten mistakes are made for not looking.

60. The trouble with most doctors is, not that they don't *know* enough, but that they don't *see* enough.—*Dominic Corrigan.*

61. In acute affections we concentrate our attention upon the diseased organ, while in chronic affections we keep the general condition of the patient more in view.—*Van Noorden.*

62. Weigh your patients, and attach much value to the indications of the weighing machine.

63. Vulnerability to disease may be local rather than general—*i.e.*, it may be due to some structural defect rather than to general constitutional weakness.

64. There are few things more difficult than to establish a fact in therapeutics. The *post hoc ergo propter hoc* fallacy is rampant. The history of medicine is full of the records of fictitious cures.

65. Discuss the coming on of years, and think not to do the same things still; for age will not be denied.—*Francis Bacon.*

66. Tell the elderly not to forget *Anno Domini.*

67. For many patients hope is the best medicine.

68. At the bedside a great deal too much optimism is a venial error compared with a little too much pessimism.

69. Get a clear answer from every patient to three fundamental questions:

(*a*) What do you complain of ?
(*b*) How long have you been ill ?
(*c*) How did it begin ?

70. In every case of serious illness someone, not necessarily the patient, should know the truth.

71. When disease takes an unexpected turn, or treatment after due trial proves ineffective, reconsider the diagnosis.

72. Always ask the question, How is the patient reacting to his malady ?

73. Every disease has a psychological as well as a pathological aspect. The patient's mentality counts for much in his response to treatment.

74. The doctor "suggests" even when he makes no conscious effort at suggestion.

75. Don't do too much. Don't say too much.—*Stokes.*

76. There is nothing so cruel as ignorance.—*Gull.*

II.—THE RESPIRATORY SYSTEM.

Physical Signs.

1. Physical signs in the lungs are signs of physical conditions; their pathological significance is a matter of inference.

Inspection.

2. It is impossible to estimate too highly the information afforded by a thorough inspection of the chest. The movements of the chest are best inspected from behind.

3. In every case of pulmonary disease ask the fundamental question, How far is the air entering the lungs ?

4. In the examination of the lungs it is imperative to bear in mind the physiological differences between the two sides of the chest.

5. The right upper lobe is in contact with the trachea, the left is relatively widely separated from it. These anatomical differences account for the more intense vocal fremitus and vocal resonance over the right upper lobe.—*Norris.*

6. Be careful to inspect carefully the alæ nasi.

Vocal Fremitus.

7. When comparing one side of the chest with the other, do not overlook the possibility that both may be affected.

8. Vocal fremitus varies much in different individuals. It is related to the sonority of the voice and the thickness of the chest wall. It is sometimes absent in health, especially in women and in children.

Percussion.

9. Most beginners percuss too heavily: light percussion is very valuable.

10. In percussion, keep a loose wrist.

11. In percussion, note both the degree of resonance or dulness and the sense of resistance.

12. Percuss from resonant towards dull areas rather than *vice versâ.*

13. In percussion of the clavicle note the difference of resonance between the inner third and the outer two-thirds.

14. In commencing consolidation of the lungs the ear can often detect a heightening of pitch in the percussion note before definite dulness is appreciable. *Ubi sonus est altior, ibi est morbus.* —*Auenbrügger.*

15. Too heavy percussion will sometimes elicit resonance in the presence of commencing consolidation or a thin layer of pleural fluid.

16. In comparing the resonance of the two sides of the chest, compare space with space and rib with rib.

Auscultation.

17. In auscultation of the lungs the ear must be trained to attend separately to—

(*a*) The character of the breathing.
(*b*) The presence and character of the adventitious sounds.
(*c*) The voice conduction.

Breath Sounds.

18. In considering modifications of breath sounds, concentrate upon the expiration; in considering adventitious sounds, concentrate upon the inspiration.—*Douglas Powell.*

19. Puerile breathing is best described as more " shrill " than ordinary breathing. Normal in the child, owing to thinness of the chest wall and active respiration, its presence in the adult suggests breathing compensatory to defective expansion elsewhere in the pulmonary area.

20. In bronchial breathing the peculiar quality is more manifest in the expiration than in the inspiration.

21. In bronchial breathing there is usually a pause between the inspiration and the expiration.

22. In bronchial breathing the expiration is usually of higher pitch than the inspiration, while the reverse is usually the case in cavernous breathing.

23. Cog-wheel breathing (*respiration saccadée*) has many explanations, pulmonary and nervous, and is not a trustworthy sign of disease. If localised, search should be made for incipient phthisis.

24. A solid growth or an aneurysm resting upon a large bronchus may cause bronchial breathing.

Adventitious Sounds.

25. Laennec described five kinds of râle—viz., the moist crepitant râle, the mucous râle, the dry sonorous râle, the dry sibilant râle, and the dry crepitant râle (*craquement*).

26. It is better to separate sonorous and sibilant râles from the other varieties and call them rhonchi. They have a distinct musical quality. Râles should be classified as either mucous (bubbling) or crepitant (crackling). The former

occur when the conductivity of the surrounding lung is normal, the latter when its conductivity is increased by consolidation, thickening, or fibrosis.

27. Râles—mucous or crepitant—are fine, medium, or coarse, according to the calibre of the bronchioles where they are produced.

28. Rhonchi are musical sounds which originate in the vibration of exudate in the respiratory passages, the exudate practically acting like a reed in a wind instrument.—*Norris.*

29. It is of fundamental importance in pulmonary diagnosis to train the ear to distinguish the mucous or bubbling râle from the crepitant or crackling râle. It must be admitted, however, that intermediate types exist.

30. Auscultation of the cough should not be omitted. It is especially useful in the case of young children.

31. In auscultation of the lungs an obscure rumbling sound is sometimes audible. It is probably of muscular causation. It is sometimes mistaken for pleural friction.

32. Coughing followed by vomiting suggests whooping cough in the child, pulmonary cavity in the adolescent or the adult.

33. Dyspnœa is either inspiratory or expiratory. If inspiratory, enquire for obstacles in the upper air passages to the entry of air to the lungs. If expiratory, enquire for emphysema, asthma, or bronchitis.

34. In all pulmonary affections enquire for and note the characters of the sputum—amount, appearance, consistency, odour, foreign bodies, microscopical findings.

35. Always examine the bases of the lungs in cases of obscure illness.

Pleurisy.

36. The proportion of cases of pleurisy of tubercular causation is not definitely determined, but is known to be large. The French School puts the proportion very high. Clifford Allbutt suggests 50 per cent. Some observers find the proportion of cases showing the presence of tuberculosis, as determined by inoculation, as high as 70 per cent.

37. Where there are grounds for considering pleurisy to be tubercular, it is important to determine whether pulmonary tuberculosis (often undetected) preceded the pleurisy, or whether the invasion of the pleural membrane was primary. The prognosis is better in the latter case, which is

commoner. The pleura on the whole resists tubercular infection well.

38. Of persons who have suffered from pleurisy, about 30 per cent. ultimately die of pulmonary tuberculosis.

39. A history of distinct exposure or "chill" is present in about one-third of cases of pleurisy, but it is doubtful whether there is a true "rheumatic" pleurisy.

40. Of acute pleurisies in children rather more than one-half have a purulent effusion.

41. Pleuritic pain may be "referred" to any part from the cervical vertebræ or the tip of the shoulder to Poupart's ligament.—*T. Horder.*

42. Pleural friction has the following characters: It is rubbing, scraping, or grating in quality; it is usually audible both during inspiration and expiration; it is superficial; it may be heard over any part of the chest, but oftener in the antero-lateral, axillary, and postero-inferior areas; it is sometimes increased by pressure of the stethoscope; it is often, but not always, accompanied by local pain; it is unaffected by coughing.

43. When there is a very thin layer of fibrin on the pleural surface, pleural friction may have a

sticky quality which sometimes causes it to be mistaken for crepitus. The distinction from rhonchus should be easy.

44. The essential signs of a large pleural effusion are the following: Impaired movement of the affected side, flattening of the spaces, diminution or loss of vocal fremitus, dulness corresponding to the distribution of the effusion, diminution or absence of breath sounds (sometimes bronchial breathing), and displacement of the cardiac impulse. Other signs sometimes present are: Skodaic resonance above the level of the effusion; Ellis's curve; Grocco's triangle; ægophony.

45. Errors in the diagnosis of pleural effusion are usually due either to neglect to fix accurately the position of the cardiac impulse, or to misinterpretation of the *auscultatory* signs.

46. In rare cases vocal fremitus is preserved over pleural effusions, sometimes due to the presence of old adhesions.

47. Bronchial breathing—often weak and "distant," rarely loud—is common over pleural effusions, especially in children.

48. Displacement of the cardiac impulse to the sound side is the rule in pleural effusion. It is more marked in left than in right effusions.

A considerable quantity of fluid may be present in the right pleura, less frequently in the left, without any displacement of the heart.

49. In pulmonary collapse the heart is displaced to the affected side—a point of importance in the differentiation of this condition from pleural effusion.

50. Ellis's curve is demonstrable in pleural effusion only when the patient is in the erect position, and not always then. It is usually absent in patients who have been for some time bedridden.

51. Flattening of the intercostal spaces is the rule in pleural effusion. Bulging of the spaces is very rare, and almost confined to very chronic cases of serous effusion and cases of empyema.

52. In the pleural effusions of children, too heavy percussion may yield a resonant note. Skodaic resonance is usually marked in these cases.

53. Voice conduction is better marked through serous than through purulent effusions (Baccelli's sign).

54. Serous effusions do not usually tend to become purulent. Purulent effusions are usually purulent from the outset.

55. A hæmorrhagic effusion is most often tubercular. It may be due to infective diseases, blood conditions, Bright's disease, cirrhosis of the liver, malignant disease, aneurysm, pulmonary infarct.

56. In malignant disease of the pleura the effusion is sero-fibrinous in at least one-third of the cases.—*Dieulafoy.*

57. Absorption of the fluid in pleural effusion is usually a normal process, hence too active treatment at an early stage is to be deprecated. Moderate stimulation of the bowels, skin, and kidneys is advisable. Hay's treatment may be tried. Counter-irritation is useful.

58. The chief guides to tapping in pleural effusion are the following: Tap at any stage in the presence of very large effusions, or of serious dyspnœa or much embarrassment of the heart; tap if there are no signs of absorption by the middle of the third week; tap if there is a double effusion.

59. Never tap a pleural effusion with the patient sitting up, but always in the semi-recumbent position.

60. Suspend the operation of tapping in the presence of severe pain, much cough, or blood-stained fluid.

61. Never allow a pleural effusion to remain long unabsorbed without exploration. Pus is often found when unexpected.

62. After tapping a pleural effusion examine for signs of pre-existing phthisis, but remember that râles are often due to the expansion of the lung on the affected side. In tubercular effusions the fluid is usually lymphocytic.

63. Acute pulmonary œdema is an occasional, but rare, sequel of tapping in pleural effusion. The patient becomes breathless and cyanosed; the pulse is extremely rapid and soft; fine râles are heard widely over the chest; there is profuse watery sputum. Venesection and active stimulation are recommended, but most cases terminate in death.

64. If a pleural effusion recurs after three or four tappings it is usually advisable to suspend this method of treatment, and to rely upon general hygienic and tonic measures.

65. Respiratory exercises to promote the expansion of an unexpanded lung following pleurisy require caution. Their injudicious use may provoke hæmorrhage or emphysema.

66. The danger of chronic pleurisy is phthisis, but many unpromising cases under suitable con-

ditions and general constitutional treatment ultimately recover.

Empyema.

67. There are no certain signs or symptoms of empyema. Baccelli's sign is insufficient for a diagnosis. The presence of pus can only be determined by exploration, but local tenderness may give a hint.

68. Empyema is often overlooked, especially in children. Scarlet fever is one of the causes.

69. Interlobar empyema is difficult of diagnosis. The chief physical sign is the presence of a band of dulness either in the second or the third intercostal space in front, or just below the spine of the scapula.

70. A few cases of empyema, especially pneumococcal effusions in children, clear up spontaneously. A larger, but still limited, number may be cured by aspiration. In most cases the only effective treatment is incision and drainage. Cases following childbirth often do badly. In children under two years of age the mortality is high.

Bronchitis.

71. The physical signs of bronchitis are usually equally distributed over both lungs. To this rule

there are occasional exceptions, especially in the convalescent stage.

72. Bronchitis is one of the diseases in which the temperature is no sure index of the severity of the attack.

73. There are four types of bronchitics:

(*a*) The patient, normally in good health, who, exposed to exciting causes, has an attack of bronchitis of limited duration.

(*b*) The patient who always has an attack of bronchitis in winter or spring, but who is well at other seasons.

(*c*) The patient who is more or less bronchitic at all times, with exacerbations at certain seasons.

(*d*) The patient who is confined to the house and practically an invalid.

74. The distinction of broncho-pneumonia and miliary tuberculosis is often difficult. Attention should be devoted to the mode of onset (more abrupt in broncho-pneumonia), the previous health of the patient (more likely to be impaired in miliary tuberculosis), the distribution of the physical signs (more irregular in miliary tuberculosis), the degree of wasting (more marked in

miliary tuberculosis), and the progress of the case. Sputum may be absent in miliary tuberculosis or free from tubercle bacilli. In miliary tuberculosis there may be evidence of the previous presence of some tubercular focus. The liver and the spleen are sometimes enlarged.

75. In chronic bronchitis the fact that the symptoms do not abate in summer marks a decided downward step.

76. Do not give carbonate of ammonia in bronchitis if the sputum is scanty.

77. The two best remedies in chronic bronchitis are iodide of potash and cod-liver oil.—*James Little.*

78. In the treatment of chronic bronchitis the circulatory conditions should have no less attention than the pulmonary conditions.

79. In all acute pulmonary affections it should be a cardinal rule to avoid any measures which tend to impede the free expansion of the chest.

80. Fœtor of the expectoration most often depends upon bronchiectasis, empyema, or pulmonary gangrene. It may depend upon abscess of the bronchial glands opening into the air passages. It is, upon the whole, rare in phthisis,

where the sputum more often has a sweetish odour.

81. In the treatment of chronic bronchitis no factor is so potent as climate.

Broncho-pneumonia.

82. The treatment of broncho-pneumonia is tonic and supporting, not sedative. Stimulants may be required. Free ventilation is essential, and the temperature of the room should not exceed 65° F. The tent should be banned.

Asthma.

83. I would define asthma as the reaction of an over-excitable bronchial centre to blood-borne irritants and to peripheral and psychical stimuli.—*A. F. Hurst.*

84. Asthma is the wayward child of pathology and the special protégé of quacks.

85. Asthma may be due to contact with the pollen of grasses; contact with the hairs of horses, cattle, cats, dogs, and other animals, the feathers of birds; emanations from such animals and from certain plants; the influence of certain foods—cereals (especially wheat), eggs, potatoes, many kinds of fish; irritation from the naso-pharynx, and other peripheral parts; but most cases arise from, or are associated with, bronchial

catarrh. Hereditary influence is marked. Psychical conditions are in some cases potent.

86. Asthma and eczema sometimes alternate in the same patient. They are rarely active at the same time. The same is true of urticaria.

87. For the relief of the asthmatic paroxysm small doses of adrenalin, a hypodermic of morphia, nitre paper, and stramonium are the most effective remedies. Nitrite of amyl is " as dangerous as it is difficult to handle " (Germain Sée). Painting the nasal mucosa with a 5 per cent. solution of cocaine may be tried. A popular proprietary remedy consists of cocaine, atropine, and nitrite of sodium.

88. For continuous treatment iodide of potash is the most important remedy. It must be given in full doses—10, 15, or 20 grain doses (t.i.d.). Arsenic is a useful addition to the iodide mixture, and lobelia, bromides, and caffeine are sometimes of service. Digestive conditions should always be carefully studied. Some asthmatics respond well to a strict dietary; others do not respond. The value of peptone therapy is under discussion.

89. The asthmatic should go supperless to bed.

90. In severe cases of nocturnal asthma the patient may be advised to try the effect of sleeping in an easy chair.

91. Change of residence is often advisable in asthma, but it is impossible to say in advance what locality will suit the patient. Localities which tend to aggravate bronchial catarrh will probably do harm. If emphysema is slight or absent, localities of moderate elevation are sometimes useful. Mont Dore (elevation 3,446 feet) has a special reputation in asthma. Damp, windy localities should be avoided. Some cases do best in the smoky atmosphere of large cities. Sea air is sometimes injurious.

Pneumonia.

92. In every case of sudden pyrexial illness with dyspnœa, enquire for pneumonia.

93. Remember the burning skin—*calor mordax* —of the pneumonic.

94. In pneumonia the patient usually feels early prostration and soon seeks his bed; in pleurisy he often goes about for two, three, or more days.

95. Mistakes in the diagnosis of pneumonia at the outset are common and arise in the following ways:

(*a*) By a misinterpretation of the initial symptoms — headache and vomiting suggest cerebral disease; abdominal pain suggests appendicitis or other

acute abdominal condition; maniacal symptoms suggest acute mania.

(*b*) By forgetting the occasional latency of the physical signs in the first two three, or four (exceptionally five or six) days of the attack.

(*c*) By misinterpretation of the physical signs in a case of pleurisy of unusually sthenic onset.

(*d*) By forgetting the frequent slightness of the symptoms in the old and the debilitated.

96. Slight cases of pneumonia are common and are often mistaken for influenza, but the generalised pains and mental depression so characteristic of influenza are absent in pneumonia.

97. In elderly patients the onset of pneumonia may be very misleading. It may be very gradual and the symptoms uncharacteristic. Careful physical examination of the chest is necessary to obviate error.

98. Apical pneumonia is often overlooked, especially in children.

99. Where apical pneumonia is suspected auscultation must include the axilla.

100. Apical pneumonia is relatively common in the elderly, in whom it involves a high mortality. In children the mortality is low.

101. Meningism is common in the pneumonia of children, and Kernig's sign may be present.

102. The primary crepitus of pneumonia is often absent in children.

103. Partial suppression of breath sounds, associated with dulness and occasional crepitations, occurs in the early days of pneumonia more frequently than bronchial breathing.—*Norris.*

104. In pneumonia the presence of a few moist subcrepitant râles at the base of the second lung more often indicates pulmonary œdema than double pneumonia.

105. Rusty sputum is usually absent in the pneumonia of the aged.

106. In pneumonia, when defervescence is by lysis, the pyrexia at this stage rarely lasts more than three or four days, if no complications are present.

107. A single pneumonic sputum settles the diagnosis.

108. In pneumonia the disease is in the lungs but the danger is in the heart.

109. The most important points in the prognosis of pneumonia are the following:

The patient's age (excluding the very young, the rule is, the older the worse); the type of the

infection; season and "epidemic constitution"; the amount of lung or lungs involved; *the state of the heart;* the general character of the symptoms (unfavourable symptoms are: cyanosis, rapid running or irregular pulse, marked cerebral excitement, persistent insomnia); the presence or absence of complications. A history of a previous attack has no weight in prognosis. The absence of leucocytosis is unfavourable. Drunkards do very badly. The presence of herpes labialis is said to be favourable.

110. Persistence of the pyrexia in pneumonia after the ninth or tenth day is most often due either to invasion of fresh areas of lung or to empyema.

111. Pneumonia often recrudesces, but seldom relapses.—*T. Horder.*

112. In pneumonia, when the pulse frequency exceeds the pulse tension in millimetres, the outlook is unfavourable (Gibson's rule).

113. In the intemperate there may be little or no pyrexia, but marked circulatory weakness and pronounced nervous symptoms. The mortality is very high.

114. In the treatment of pneumonia bear in mind the following points:

(*a*) The patient has great difficulty in the elimination of CO_2.

(*b*) There is a tendency to clotting of blood in the veins and in the heart.

(*c*) The most frequent cause of death is heart failure and œdema of the lungs.

(*d*) The toxæmia is intense, but self-limited and short-lived.

115. The most essential points in the treatment of pneumonia are: Absolute rest; abundance of fresh air; suitable nourishment; support to the heart when required.

116. The cry of the pneumonic is for air. Hot, ill-ventilated rooms are death-traps.

117. Depletion and stimulation as routine measures in pneumonia are both wrong. The patient must be studied. Overfeeding and the excessive use of alcohol are common mistakes. Frequent tepid or cold sponging is useful. Too much purgation should be avoided, especially towards the crisis. Hyperpyrexia calls for the application of cold.

118. The value of drugs in the treatment of pneumonia is a moot point. In mild and favourable cases, especially in young patients, they are unnecessary. Digitalis, strychnine, and caffeine are favoured by many observers. Trousseau treated pneumonia with pills of digitalis and antimony. Oxygen may be tried.

119. The Rockefeller Institute of New York reports a considerable reduction in the mortality of Type I. pneumonia by the use of a specific serum.

Pulmonary Tuberculosis.

120. In pulmonary tuberculosis what is inherited in certain cases is not the disease, but susceptibility to infection.

Causation.

121. The infectivity of tuberculosis is the necessary corollary of the pathology, but the influence of the soil may outweigh the influence of the seed. The relatively small number of cases of infection from wife to husband or husband to wife which can be proved is remarkable. We must distinguish between tubercular infection and tubercular disease. Many persons are tolerant of the infection and do not develop the disease.

122. Dirt, overcrowding, bad ventilation, unhealthy trades, and malnutrition are the chief predisposing factors in pulmonary tuberculosis. The drop in the tuberculosis mortality in Great Britain began soon after the Repeal of the Corn Laws and the commencement of the era of cheap food and of improved sanitation.

123. There is much difference of opinion regarding the part played by milk in the dissemina-

tion of tuberculosis. Koch's views on the subject have not been generally accepted. Milk infection is due to the bovine bacillus, and is commoner in childhood.

124. On the whole, males suffer more than females from pulmonary tuberculosis. The cause is mainly industrial and occupational. Where females suffer more, the explanation is to be found in the conditions of female employment.

125. The French School lays special stress upon alcoholism as a predisposing cause of tuberculosis. Its influence may be direct or indirect—*i.e.*, it may predispose to infection or be a cause of conditions (bad hygiene, poverty, etc.) which predispose to infection.

126. Every youth or adult who wastes much or rapidly, with or without fever, must be suspected of tuberculosis, in the absence of diabetes and exophthalmic goitre.—*Dieulafoy.*

127. Every girl or young woman who has neither genuine chlorosis, Bright's disease, nor syphilitic anæmia, but who has the appearance of chloro-anæmia, must be suspected of having tuberculosis. —*Dieulafoy.*

Modes of Onset.

128. The modes of onset of pulmonary tuberculosis are worthy of careful study. These modes are as follows:

(*a*) The insidious, characterised by an obscure failure of health.

(*b*) The dyspeptic-anæmic, when dyspepsia and anæmia are early and prominent features.

(*c*) The hæmorrhagic, when hæmoptysis is the first symptom to attract attention.

(*d*) The catarrhal, when signs of general bronchial catarrh are early and prominent.

(*e*) The pleuritic, when the disease is preceded or accompanied by pleurisy.

(*f*) The laryngeal, when laryngeal symptoms occur early.

(*g*) The cervico-glandular, when the cervical glands are first affected.

These modes of onset will be found to throw some light on the problem of the prognosis of pulmonary tuberculosis (see pp. 41-2).

129. Many cases of pulmonary tuberculosis are secondary to tuberculosis of the tracheo-bronchial glands.

130. The various forms of pulmonary tuberculosis are pathologically identical; the differences in clinical course arise from the varying degrees of resisting power on the part of the patient, and probably, in some cases, from differences in the virulence of the infection.

Early Diagnosis.

131. In the diagnosis of incipient tuberculosis of the lungs the most important points are the following: History (family and personal), loss of weight, habitual frequency of the pulse, afternoon pyrexia aggravated by exertion, sense of fatigue, slight hæmoptysis, abnormal signs at one apex or at the hilus. The various tuberculin tests do not serve to distinguish tubercular infection from tubercular disease. Of these tests the subcutaneous (Koch's) test is probably the most trustworthy.

132. Opinions differ as to whether the earliest physical signs of pulmonary tuberculosis are those yielded by percussion or by auscultation. It is probable that there is no hard-and-fast rule on this point.

133. In the diagnosis of incipient pulmonary tuberculosis symptoms and history are more trustworthy than doubtful physical signs; symptoms are significant even in the absence of physical signs; the thermometer and the weighing machine give invaluable help.

134. Signs limited to one apex are nearly always of tubercular origin. The exceptions to this rule are few—apical pneumonia, bronchiectasis follow-

ing broncho-pneumonia in the child, malignant disease.

Physical Signs.

135. Persistent frequency of the pulse and a slight degree of afternoon or evening pyrexia, not otherwise accounted for, raise a strong suspicion of pulmonary tuberculosis. A rise of temperature of more than 1° after exercise is significant.

136. In the absence of heart disease, aneurysm, or any general dyscrasia, hæmoptysis is nearly always indicative of pulmonary tuberculosis.

137. A limited, scanty, sticky, obscurely crepitant râle at one apex, elicited by coughing and persistent, is an almost certain sign of pulmonary tuberculosis, if no other explanation is present.

138. Radiography is valuable in the diagnosis of incipient pulmonary tuberculosis, but it does not serve fully to distinguish recent from healed lesions. Shadows at the hilus are often due to quiescent glandular disease.

139. In searching for signs of early pulmonary tuberculosis it is important to examine with care in the interscapular region about the level of the spines of the fourth and fifth dorsal vertebræ and also in the arch of the axilla.

140. In any case of pulmonary tuberculosis the disease is more extensive than the physical signs would seem to indicate.—*S. Gee.*

141. Phthisis is usually of longer duration than the history indicates.—*T. Horder.*

142. He who lays too much stress on the uncertain results of percussion in pulmonary tuberculosis will often make a false diagnosis.—*Strümpell.*

143. A considerable degree of tubercular infiltration may be present without appreciable alteration in the percussion note.

144. Slight impairment of expansion at one apex is sometimes better appreciated by the hand than by the eye.

145. Compensatory emphysema is usually present round the seats of quiescent pulmonary tuberculosis and may cause difficulty in diagnosis.

146. In thin, delicate patients who complain of "asthma," enquire for retrocedent tuberculosis with local emphysema.

147. Inequality of the pupils is occasionally present in apex tuberculosis.

148. Children are sometimes thought to be the subjects of pulmonary tuberculosis when post-mortem examination shows no tubercles, but only cirrhosed lung and dilated air tubes.—*S. Gee.*

149. The "line of march" of the lesions in pulmonary tuberculosis is more regular in the adult than in the child.

150. After puberty a tubercular lesion in any part of the body is almost always accompanied by pulmonary tuberculosis.—*Louis.*

151. In investigating an obscure case of hæmoptysis, do not omit to consider whether the hæmoptysis might be feigned, especially if the patient is a young woman.

152. The routine examination of the testes for tuberculosis will save two or three mistakes in the year.—*W. Osler.*

153. The examination of the sputum, when available, for tubercle bacilli is imperative in all cases of suspected pulmonary tuberculosis, but in the presence of suspicious signs or symptoms a negative result must be received with caution. Tubercle bacilli are not usually present in early hæmoptysis.

154. Claims to found a diagnosis in pulmonary tuberculosis on the lines of the Widal and Wassermann reactions are under consideration.

155. Arneth's method, based upon changes in the leucocytes, has not met with general acceptance.

156. If marked physical signs are present in the chest and tubercle bacilli are found to be absent

on repeated examination, the case is probably not tubercular.

157. Fœtor of the sputum is rare in pulmonary tuberculosis.

158. When acute tuberculosis supervenes upon a chronic lesion it usually takes the form of miliary tuberculosis.

159. Mixed infections are the rule in pulmonary tuberculosis and account for many of the clinical features of the disease.

Cavities.

160. The diagnosis of pulmonary cavity is often obvious, sometimes difficult, not seldom impossible. The position, size, contents of the cavity, and the condition of the surrounding lung tissue give rise to the most diverse signs.

161. Over a cavity of considerable size, lying near the surface, and containing some secretion, the following signs may be expected: Flattening of the chest wall; dulness or hyperresonance, occasionally the *bruit de pot fêlé* on percussion; bronchial or cavernous breathing; coarse, moist crepitations (sometimes "gurgling" in quality); bronchophony, pectoriloquy. The bell sound may be present over larger cavities.

162. The *bruit de pot fêlé* is common over cavities containing air and communicating freely with a bronchus. It is heard less frequently over a pneumothorax with open fistula, in the early stage of pneumonia, and over pleural effusions.

163. Pectoriloquy is not confined to cavities. It may be present in pulmonary consolidation over a large bronchus, and rarely over lung compressed by fluid.

Prognosis.

164. The best guide to prognosis in pulmonary tuberculosis is the observed tendency of the individual case.

165. Never give a prognosis in pulmonary tuberculosis until there is evidence regarding the patient's powers of resistance.

166. The great question in pulmonary tuberculosis is not the fact of infection, but the mode in which the patient is reacting to infection.

167. In the prognosis of pulmonary tuberculosis the constitutional state is a better guide than the physical signs.

168. The greater the progress of the lesions compared with the duration of the symptoms in pulmonary tuberculosis, the worse the outlook.

169. A localised tuberculous infection is only a skirmish, such as is constantly going on at the frontiers of a great empire.—*W. Osler.*

170. The digestive capacity of the patient has much weight in prognosis. Patients who feed well usually do well, and *vice versâ.*

171. Never give a definite opinion as to how long a patient suffering from pulmonary tuberculosis will live; for the only certainty is, that if you do, you will be wrong.—*S. Gee.*

172. The more unfavourable the circumstances which have led up to the attack of pulmonary tuberculosis, the better the prospect is there of recovery, if they can be removed or mitigated.—*Douglas Powell.*

173. In incipient pulmonary tuberculosis hæmoptysis is rarely a source of serious danger, but it is often of grave import in advanced stages of the disease where cavities are present.

174. The " inverse " type of pyrexia is of grave significance in pulmonary tuberculosis.

175. Subnormal temperatures in pulmonary tuberculosis are nearly always of evil omen.—*Strümpell.*

176. In phthisical women allow for the premenstrual rise of temperature.

177. Late flattening coincident with lessened activity of the disease (as contrasted with early flattening from sheer loss of lung substance), and compensatory expansion of the sound lung encroaching upon the region of the affected side, are of considerable value in favour of a hopeful prognosis in pulmonary tuberculosis.—*Douglas Powell.*

178. There is a type of pulmonary tuberculosis characterised by occasional attacks of sharp hæmoptysis, obscure physical signs, and good constitutional conditions, which often does well. In such cases there is probably a small quiescent cavity with a miliary aneurysm.

179. Chronic tubercular cavities in the lungs may dry up and cease to give trouble, but this is rare.

180. The mode of onset in pulmonary tuberculosis throws some light upon prognosis.

The following modes of onset are relatively favourable—viz.:

(*a*) The gradual (insidious) onset.
The inference from the slow progress of signs and symptoms is that the patient's resisting power is fairly good.

(*b*) The pleuritic onset.

Pleurisy, at the onset of pulmonary tuberculosis, puts the stamp of chronicity on the case.—*W. Osler.*

(*c*) The cervico-glandular onset.

Tuberculosis of the cervical glands only exceptionally leads to pulmonary tuberculosis.

The following modes of onset are relatively unfavourable—viz.:

(*a*) The dyspeptic-anæmic onset.

Early digestive failure prejudices the outlook.

(*b*) The catarrhal (bronchitic) onset.

The wide distribution of catarrhal signs probably indicates a more or less generalised lesion.

(*c*) The laryngeal onset.

As tuberculosis seldom or never attacks the larynx primarily, early laryngeal signs and symptoms suggest that the disease has already undergone extension.

Involvement of the larynx doubles the average mortality.

No definite prognostic indication can be drawn from the hæmorrhagic mode of onset. Attacks

of hæmoptysis may pass off without effect upon the general condition or may initiate active progress of the lesions.

181. The prevention of tuberculosis is incalculably easier and cheaper than its cure. The key to prevention is the provision of healthy homes, suitable food, the medical supervision of schools, the control of unhealthy industries, and the discouragement of the marriage of infected individuals and those of markedly infected stocks.

Treatment.

182. In the treatment of tuberculosis the most essential points are the following: A healthy environment, the promotion of the patient's nutrition, the regulation of rest and exercise, medical supervision.

Sanatoria.

183. Sanatorium treatment rests upon a few elementary principles which can be imitated with some success in any suitable locality under favourable domestic conditions, but medical supervision is essential.

184. Sanatorium treatment is of great value as an educative discipline and as a means of arrest in early cases. In advanced cases, with some exceptions, the results are poor. Treatment is often too brief to effect lasting benefit. One of

the chief functions of sanatoria is to secure the isolation of infective cases.

185. Of patients who have obtained an arrest of their disease under sanatorium treatment, but who have returned to unhealthy domestic surroundings or unhealthy trades, a large proportion are dead in three or four years.

186. The danger of sanatorium treatment is the formation of the invalid habit, hence work should be encouraged in suitable cases.

187. Tuberculosis colonies are a necessary auxiliary to sanatorium treatment.

188. Keep the skin of the phthisic scrupulously clean.

189. Do not give any medicine in pulmonary tuberculosis which is found to impair normal appetite.

190. Under superalimentation the patient may gain in weight while the disease continues to progress.

Remedies.

191. Drugs are of minor importance in the treatment of pulmonary tuberculosis, but are not to be neglected. The most useful drugs are the following: Cod-liver oil, maltine, hypophosphites, creosote, guaiacol, arsenic.

192. Cod-liver oil still holds its place as the most useful remedy. Moderate doses are usually advised, but Dieulafoy states: "I have obtained excellent results with cod-liver oil in large doses—*e.g.*, a tumblerful. Some patients take 10 to 15 ounces daily for several weeks, and the results obtained are often surprising." The remedy is better borne in cold weather. Children usually take it well. Marked dyspepsia, anorexia, and diarrhœa are contra-indications to its use.

193. The evidence in favour of creosote and guaiacol in the treatment of pulmonary tuberculosis, though not decisive, is sufficient to warrant their employment in suitable cases.

194. For the relief of the anæmia so often present in pulmonary tuberculosis, arsenic is a better remedy than iron.

Inhalations.

195. Treatment of pulmonary tuberculosis by continuous inhalations of iodine, carbolic acid, creosote, thymol, eucalyptol, or some combination of these remedies, has been strongly recommended, but the method is troublesome to apply, and few patients can be induced to persevere with it. Its success is doubtful.

196. From time to time certain special kinds of diet have been suggested as curative of phthisis,

such as the milk cure, the whey cure, koumiss treatment, the grape cure, and the like. None of these measures of treatment, however, will, as "cures," bear examination, much of the benefit of the treatments being attributable to the healthy surroundings of the "cure," and it is now admitted that such cures are only adapted to a limited number of favourable cases of the disease. —*Douglas Powell.*

197. Cough at night interfering with sleep calls for the cautious use of sedatives. Cough in the morning calls for measures to promote the expulsion of the accumulated secretion from cavities or bronchial tubes.

Tuberculin.

198. The value of tuberculin in the treatment of pulmonary tuberculosis remains a matter of controversy. It has its advocates and its opponents. It is generally agreed that it should not be given in active disease, and that, if employed, the dose should at first be minimal and the effect carefully watched. There is much difference of opinion regarding the relative value of the various kinds of tuberculin. Its use in pulmonary cases is declining.

199. In pulmonary tuberculosis persistent diarrhœa may depend upon dietetic errors,

intestinal ulceration, or lardaceous disease of the bowels. The treatment must be arranged accordingly.

Hæmoptysis.

200. There is no trustworthy remedy for hæmoptysis. In many cases all that is required is rest, light diet, purgation, and morphia. In severe cases nitrite of amyl is worthy of trial. Ipecacuanha in full doses has been recommended. The value of the calcium salts is doubtful. Ergot and adrenalin are contra-indicated.

201. In cases of extremity, venesection or the induction of artificial pneumothorax may be considered.

202. Extreme restriction of the diet is unnecessary in cases of hæmoptysis. Some limitation of fluids is advisable.

203. In severe hæmoptysis the immediate danger may be asphyxia. In such cases "tell the patient to cough it up."—*Sutton.*

Night Sweating.

204. Drugs are doubtful remedies in the treatment of the night sweating of pulmonary tuberculosis. Rest, good feeding, fresh air, and hydrotherapy are the best measures. Atropin is potent

for immediate relief, but its continued use is injurious. Oxide of zinc is sometimes useful, also aromatic sulphuric acid.

Artificial Pneumothorax.

205. Artificial pneumothorax is a remedy of value in pulmonary tuberculosis when the disease is almost, or altogether, confined to one lung. The cases suitable for this form of treatment constitute only a small proportion.

Climatic Treatment.

206. Climatic treatment is often of great value in pulmonary tuberculosis. The high altitudes are most in favour, if no contra-indications are present, but good results may be obtained at such resorts as the uplands of Cape Colony or Queensland, New Zealand, Colorado, Southern California, Algeria, the Canary Islands, the Riviera, Arcachon, Biarritz, Bournemouth, Ventnor, Torquay, Falmouth, etc.

207. A resort for pulmonary tuberculosis should possess the following characters: A high average of sunshine and pure air, a dry subsoil, protection from wind, absence of fog or air pollution. Insolation has a large share in the results obtained.

208. The high altitudes have the following advantages: Relative freedom from mist, fog,

and bacterial activity; greater diathermancy of the air; a high average of sunlight and fine weather; sparseness of population and hence a minimum of sources of air pollution; a stimulating effect upon respiratory activity and blood formation; a general tonic influence.

Davos owes some of its value to its large degree of local shelter. The high altitudes are contra-indicated in the following conditions: Activity of the disease; circulatory weakness; any considerable degree of emphysema; rheumatism; albuminuria; pronounced neurosis; inability to bear cold. Hæmoptysis and laryngeal involvement are not contra-indications.

Cancer of the Lungs.

209. A sudden attack of hæmoptysis in a patient who has been previously operated on for carcinoma or sarcoma should lead to enquiry for malignant disease of the lungs. The physical signs of this condition present great variations. They may be those of consolidation, softening, excavation, or merely those of bronchial catarrh. Pleural effusion is often present, and the fluid may be sero-fibrinous or hæmorrhagic. Pain in the chest is usually a prominent symptom. The steady progress of the case and the absence of response to treatment are very significant.

Pneumothorax.

210. Most cases of pneumothorax are of tubercular origin. When pneumothorax supervenes on pulmonary tuberculosis it often hastens the fatal issue, but sometimes arrests the progress of the disease. The diagnosis is usually obvious, but if the tension of the contained air is high, the muffled percussion note may cause difficulty.

Pulmonary Collapse.

211. Collapse of a large part of a lung occurs in young children from very slight causes, especially pulmonary catarrh. Hence, when signs of consolidation are found in a young child, we must always remember that they may be due to collapse.—*S. Gee.*

Pulmonary Infarction.

212. A sudden attack of hæmoptysis, accompanied by pain in the chest, should cause enquiry for pulmonary infarct, especially in the presence of infective conditions or heart disease.

III.—THE CARDIO-VASCULAR SYSTEM

1. Always examine a cardiac patient both in the upright and in the recumbent position.

2. Always fix carefully the position of the cardiac impulse.

3. In children the apex-beat may be normally in the mammary line, or even a little external to it.

4. Do not neglect immediate auscultation in cardiac cases.

5. Weak cardiac sounds are often due to a thick chest wall.

6. In investigating a cardiac case proceed on the following lines:

(*a*) What can I learn regarding the heart itself?

(*b*) What can I learn regarding the state of the arteries and veins?

(*c*) What can I learn regarding the state of the various viscera?

Causation of Heart Disease.

7. Congenital lesions in infancy; rheumatism in childhood, adolescence, and early adult life; degenerations—depending on hereditary tendency, the wear and tear of life, syphilis, alcoholism, or natural involution, at and after middle life, are the principal causes of heart disease.

8. Syphilis is a potent cause of cardio-vascular disease. It may give rise to arterio-sclerosis, aortic disease, endarteritis, amyloid degeneration of vessels, thrombosis, aneurysm.

9. Syphilitic disease of the heart is rare under twenty-five to thirty years of age. It should not be overlooked that a positive Wassermann reaction may be present in a patient whose heart lesion depends on other causes—*e.g.*, rheumatism.

10. The healthy heart will endure much muscular strain without injury, but it is unsafe to hold that injury never results from physical exertion.

11. The study of heart failure practically resolves itself into an enquiry into the circumstances which have impaired the functional efficiency of the heart muscle.—*Mackenzie.*

12. The heart would never fail if its muscle were never given more work to do than it can perform without exhaustion.—*Mackenzie.*

13. Excess in tobacco affects mainly the cardiac innervation. Huchard thought that it was an important cause of arterio-sclerosis.

14. Grave disease of the heart in the absence of disease of the valves is extremely common in the elderly. It is also common enough in the young. —*Lewis.*

15. In acute rheumatism the simultaneous involvement of pericardium, endocardium, and myocardium is rare in the adult, not rare in the child.

16. Premature arterial degeneration means that bad material was used in the tubing.—*W. Osler.*

17. In a doubtful case of endocarditis the presence of subcutaneous nodules may determine the presence of rheumatism and confirm the suspicion of rheumatic endocarditis.

18. Even if the old view that phthisis and heart disease are antagonistic be not correct, yet it is rare to meet with either acute rheumatic arthritis or valvular affections of the heart in persons suffering from phthisis.—*Clifford Allbutt.*

19. Whether a purely functional disorder by damnable iteration can hammer disease, as it were, into a harassed organ, is hard to say.—*Clifford Allbutt.*

20. I cannot recall a single case where I could reasonably attribute heart failure to a child's voluntary exertions.—*Mackenzie.*

21. A man is as old as his arteries.—*Cazalis.*

22. When a patient complains of his heart, think of his stomach; when he complains of his stomach, think of his heart.

23. In heart disease diagnose mainly by signs; prognose mainly by symptoms.

24. The cardiopath tends to become a neuropath.—*Mackenzie.*

25. Nothing is worse for cardiopaths than to get into a state of introspection and constant apprehension.—*Babcock.*

Symptoms.

26. The first symptom of failing heart is either dyspnœa or cardiac pain.

Cardiac Dyspnœa.

27. Cardiac dyspnœa is best described as sighing or panting in character.

28. Cardiac dyspnœa may have the following immediate causes—viz.:

(*a*) Defects in the blood-supply to the respiratory centre in the medulla.

(*b*) Congestion and œdema of the lungs.

(*c*) Hydrothorax.

(*d*) Congestion of the abdominal viscera involving restriction of the free excursion of the diaphragm.

29. Cardiac dyspnœa is often worse at night. The stimulus to the respiratory movements fails when the patient sleeps, hence he wakes up breathless and in distress.

30. When a cardiac patient complains of dyspnœa during rest there is probably some involvement of the lungs.

Cardiac Pain.

31. Cardiac pain has many causes. It is often toxic (alcohol, tobacco, tea, dyspepsia, lithæmia, glycosuria); it is prominent in pericarditis, angina pectoris, aneurysm, functional heart disease, coronary disease, and many cases of aortic disease; it occurs in direct pressure on the cardiac nerves, and in neuritis of these nerves; it is usually increased by exertion or a full meal; it is always superficial; it is usually unilateral, rarely bilateral, in seat.

32. When pain in the characteristic cardiac area occurs only when the patient is at rest, the gravest conditions of disease should be excluded and search instituted for some provoking cause, especially some source of poisoning —*Mackenzie.*

Palpitation.

33. When a patient seeks advice *solely* for palpitation, we may probably infer that the case is functional.—*Potain.*

34. In functional palpitation the patient is more often of the female sex and under fifty years of age; dyspeptic or anæmic; the feeling of subjective distress is usually marked; the heart is usually normal in size and in position; the first sound in the mitral area is usually short and loud; systolic murmurs are often present in various areas; the pulse tension is usually low.

35. In cases of rapid irregular action of the heart there may be a difficulty in distinguishing the first sound from the second sound. The best guide is the accent. In the mitral and tricuspid areas the accented sound is the first sound. At the base or over the great vessels the accented sound is the second sound.

Œdema.

36. In testing for cardiac œdema do not omit to examine the soles of the feet and the lumbar region.

Syncope.

37. An attack of syncope can usually be distinguished from an hysterical fit or *petit mal* by

attention to the following points: History and causation; the mode of onset of the attack; the patient's aspect; the state of the pulse; the duration of the attack; the patient's state on recovery.

Murmurs.

38. In the investigation of cardiac murmurs attend to the following points:

(*a*) The quality of the murmur.
(*b*) Its point of maximum intensity.
(*c*) Its line of conduction.
(*d*) Its time or rhythm.
(*e*) How far it replaces the corresponding cardiac sound.
(*f*) The effect of posture and exercise.

Hæmic Murmurs.

39. The mechanism of " hæmic " or functional murmurs is obscure. The commonest functional murmur—viz., that which has its maximum intensity in the pulmonary area—has been attributed to kinking and consequent narrowing of the pulmonary artery due to dilatation of the right ventricle. It is improbable that a murmur is ever due to alterations in the quality of the blood.

40. The intensity of a murmur is no help in distinguishing functional from organic murmurs.

41. Systolic murmurs are common in the healthy heart during excitement or after exercise. They disappear as the heart quiets down.

42. Musical murmurs—ringing, cooing, whistling—are nearly always organic.

43. A murmur audible without contact with the wall of the chest is always organic.

44. Prolongation of the first sound of the heart is the whisper of an approaching murmur.—*Sibson.*

45. Many seeming reduplications of the heart sounds are indeed murmurs.—*S. Gee.*

Cardio-Pulmonary Murmurs.

46. Cardio-pulmonary murmurs are very common, and may give rise to difficulty in diagnosis. They are always systolic, much under the influence of respiration, loudest at the end of a forced inspiration, tend to diminish in intensity or to disappear when the patient lies upon his right side; have no definite conduction.

Posture and Murmurs.

47. The influence of posture upon cardiac murmurs is not reducible to strict rules. The following points have a certain value: Functional murmurs are louder during recumbency; systolic

murmurs in the mitral area, whether functional or organic, are usually, but not always, louder during recumbency; the murmur of aortic regurgitation is usually louder during recumbency; the murmurs of mitral stenosis and of aortic stenosis are sometimes, but not always, louder in the erect position.

48. The following conditions may be present without murmur—viz., mitral stenosis either at a very early or in the terminal stage; certain cases of aortic regurgitation; mitral regurgitation with extreme heart failure; malignant endocarditis.

49. Murmurs may be present in the healthy heart.

50. The present tendency to minimise the importance of murmurs is dangerous. They may be of slight importance, but this conclusion is only justified after a careful survey of the case from every point of view.

51. Murmurs are always modified in some degree by conduction through a stethoscope; hence direct auscultation is not to be entirely neglected.

52. The *bruit de diable* is much louder in the sitting position, and may disappear altogether when the patient lies down. It is usually louder on the right side of the neck.

Aortic Regurgitation.

53. Aortic regurgitation is rare in childhood; not common in adolescence or early adult life; common in middle life and later; rare in old age. There is a large preponderance of cases in the male sex. In early life rheumatism is the chief causal factor; at middle life syphilis has much influence; after middle life arterio-sclerosis is usually present. The combination of syphilis, alcohol, and muscular strain is common.

54. The pallor of aortic disease may be due either to arterial anæmia or to general and constitutional causes.

55. The subjects of aortic regurgitation often waste.

56. The murmur of aortic regurgitation has the following characters: It is usually blowing, rarely ringing in character; it is a prolonged sustained murmur, diminuendo towards the first sound. Its point of maximum intensity is very variable and may be anywhere in the neighbourhood of the sternum. It is often at Erb's point, or mid-sternum, less often in the aortic area, the left border of the sternum below Erb's point, or the region of the ensiform. It may or may not be audible at the apex. It usually occupies a considerable portion of the diastole. It may

entirely replace the second sound, or the snap of the valve may be distinctly audible with the murmur.

The conduction of the murmur of aortic regurgitation is downwards along one or both borders of the sternum; towards and sometimes to the apex; only rarely into the large vessels of the neck. It is disputed whether Duroziez's murmur in the femorals is a conducted murmur or produced *in situ* by pressure of the stethoscope.

57. Flint's murmur is present in nearly half the cases of aortic regurgitation. It simulates the murmur of mitral stenosis, but the distinction is usually easy. Flint's murmur is less loud and definite than the murmur of mitral stenosis; it is variable from time to time; it is diminuendo towards the first sound; it does not terminate with a characteristic "snap"; a thrill may be absent or ill-defined.

58. In exceptional cases the murmur of aortic regurgitation may be absent or very faint. It is sometimes absent in the presence of mitral regurgitation or mitral stenosis. In such cases diagnosis must be based upon the state of the left ventricle and the characters of the pulse. Careful inspection of the carotids may give the necessary hint. Immediate (direct) auscultation should not be omitted in such cases.

59. In aortic regurgitation absence of the second sound in the neck indicates an extensive lesion.

60. The murmur of aortic regurgitation is sometimes missed owing to forgetfulness of the fact that it may be audible only to the left of the sternum or in the region of the lower end of the sternum.

61. Corrigan's pulse implies a moderate or considerable degree of reflux and a certain degree of power in the left ventricle. It may be absent owing either to a very small lesion or a widely gaping orifice, or a weak left ventricle, or the presence of co-existing mitral lesion.

62. In aortic regurgitation when the heart is weak, the "pulsus celer" may be recognisable in the carotid or crural arteries while absent in the smaller arteries.

63. Patients suffering from aortic disease are more often unconscious of their condition than patients suffering from mitral disease.

64. Aortic patients are more often able to lie with the head low than mitral patients, as recumbency tends to mitigate the effect of gravity upon the circulation.

65. A double murmur at the aortic orifice does not usually imply the presence of narrowing

of the orifice. Some degree of narrowing occurs in about 4 per cent. of cases of aortic regurgitation.

Aortic Stenosis.

66. The first thing to say (to oneself) about a systolic bruit heard at the aortic base is that the case is probably not one of aortic stenosis.—*T. Horder.*

67. The causes of a systolic bruit in the aortic area are many—viz., dilatation of the aorta, atheroma of the base of the aorta, syphilitic aortitis, roughening of the intima of the aorta, aneurysm of the ascending portion of the arch of the aorta, anæmia, debility. A large proportion of systolic bruits in this situation are of minor importance.

68. Aortic stenosis, in typical form, is extremely rare. The classical signs are the following: The presence of a systolic vibratory thrill in the aortic area; a rough, prolonged murmur with its maximum at the second right costal cartilage, well conveyed into the neck; weakness or absence of the second sound in the aortic area; a moderate degree of hypertrophy of the left ventricle; a small, regular, somewhat infrequent pulse of moderate or rather high tension.

69. The causation of aortic stenosis is obscure. Some cases are of rheumatic origin. A larger number are associated with vascular degenerations.

70. In nearly all cases of aortic stenosis some degree of reflux is also present.

Mitral Stenosis.

71. Mitral stenosis is the characteristic lesion of adult females, but is not rare in the male sex. Rheumatism is a common factor, but the causation is sometimes obscure. The French School holds that a considerable proportion of cases are congenital in origin. It is rare under fifteen years of age, and uncommon over forty. Females suffer in the proportion of three or four to one.

72. The essential signs of mitral stenosis are the following: The characteristic "purring" thrill; a rough, rumbling or "blubbering," crescendo murmur, presystolic or diastolic in time; a short, sharp, high-pitched "thumping" first sound. The second sound at the apex may be, according to the stage of the disease, normal, reduplicated, weak, or absent.

73. The physical signs of mitral stenosis present much variation and are much influenced by rest and exertion. The characteristic murmur may

be absent during rest or in advanced cases, or the murmur alone may be present and both sounds absent. The murmur often varies much from time to time. It often disappears in the last weeks of life, or is merged in a systolic murmur. There is sometimes a short diastolic murmur succeeded by a brief pause, followed by the characteristic pre-systolic murmur.

74. In mitral stenosis the " buttonhole mitral " is commoner in adults, the " funnel mitral " commoner in young subjects.

75. Mitral stenosis is the result of a slow sclerosing process in the valve and does not arise in acute endocarditis.

76. In mitral stenosis, when the classical signs are present without signs of co-existing regurgitation, the degree of stenosis is usually high.

77. The co-existence of regurgitation and doubling of the second sound at the apex indicate a moderate degree of stenosis.

78. In mitral stenosis a diastolic murmur indicates a more advanced stage than a pre-systolic murmur.

79. A double murmur in the mitral area usually indicates that stenosis is the more important lesion.

80. Regurgitation sometimes precedes stenosis at the mitral orifice. Regurgitation in the child may lead to stenosis in the adult.

81. In some cases of mitral stenosis the pulse is small and tense in consequence of obstruction to the flow of blood out of the capillaries.

82. In young women with cardiac symptoms the distinction between functional disorder and early mitral stenosis may cause difficulty. A history of rheumatism has much weight. The first sound in the mitral area in functional cases is often short and sharp, but does not possess the characteristic "snap" of mitral stenosis. In functional cases some cause—anæmia, dyspepsia, neurosis—is usually present. A reduplicated second sound strengthens the suspicion of mitral stenosis. In mitral stenosis there is often a malar flush and undue redness of the lips, while anæmia is more probable in functional cases.

Mitral Regurgitation.

83. The physical signs of a typical case of mitral regurgitation are the following: Some degree of displacement of the cardiac impulse downwards and outwards; increased force of the cardiac impulse; increased area of cardiac dulness towards the left, and in the later stages also towards the right; the presence of a murmur usually

blowing in character, of variable intensity, point of maximum intensity at the apex, conducted towards the left axilla and often to the back, wholly or partially replacing the first sound; accentuation of the pulmonic second sound; a pulse of increased frequency, moderate or low tension, and sometimes irregular.

84. Many observers are of opinion that the murmur of mitral regurgitation has its point of maximum intensity sometimes at the upper left edge of the sternum in the neighbourhood of the left auricle, or in the third or fourth left interspace in the vertical nipple line or just outside this line.

85. The murmur of mitral regurgitation often shows want of uniformity as regards loudness, distinctness, and rhythm, depending upon differences in the energy of the heart's action, or upon the presence of heart-block or of auricular fibrillation.

86. There are many causes of a systolic murmur in the mitral area—mitral regurgitation, cardio-pulmonary murmurs, tricuspid reflux, aortic stenosis. The last is the rarest cause.

Doubtful apical murmurs are not accompanied by hypertrophy of the left ventricle or by accentuation of the pulmonic second sound.

The systolic murmur in the mitral area depending upon anæmia or myocardial weakness is the result of regurgitation through the mitral orifice which may be temporary.

A systolic murmur at the apex is more often of organic causation in the child than in the adult.

If a patient suffering from acute rheumatism develops a mitral systolic murmur in the first or second week of the disease, the cause is usually endocarditis. If the murmur develops in the third or fourth week or later, the cause may be anæmia or atony of the myocardium.

Tricuspid Disease.

87. Tricuspid murmurs are commonly loudest over the lower part of the sternum. As they are exceedingly rare, however, the diastolic murmur being even rarer than the systolic, and as aortic murmurs are often heard with great distinctness in the same region, the actual existence of a genuine tricuspid murmur can be affirmed only when the consecutive signs of aortic lesion are obviously wanting, and those of tricuspid lesion (more particularly the venous pulse) are demonstrably present.—*Guttmann.*

88. Diagnose tricuspid regurgitation by its consequences rather than by its signs.

Pericarditis.

89. If a patient suffering from acute rheumatism develops dyspnœa and some increase of temperature, enquire for pericarditis.

90. Pericardial friction has the following characteristics: It is rubbing or scraping in quality, rapid, often "to and fro," heard only over the præcordium, oftener at the base or in the sternal region than at the apex, increased by pressure of the stethoscope, usually accompanied by local pain.

Small pericardial effusions are often overlooked. The differentiation of moderate pericardial effusion from cardiac dilatation is sometimes difficult, especially in females with large mammary development. The most helpful points are the following: Accurate determination of the position of the cardiac impulse and a careful mapping out of the right border of the heart (straight in dilatation, sloping upwards and towards the left in pericardial effusion). Pericardial effusion develops much more rapidly than dilatation. Rotch's sign may help.

91. In a child presenting symptoms of cardiac insufficiency with obscure physical signs, enquire for pericardial adhesions.

92. The diagnosis of pericardial adhesions is often difficult. The points usually relied upon

are the following: Systolic retraction of the spaces about the apex-beat; systolic retraction of the lower end of the sternum; absence of alteration in the area of præcordial dulness, and in the position and force of the cardiac impulse during the respiratory movements; diastolic collapse of the cervical veins; failure of the sternum to advance during inspiration. Enlargement of the liver is common.

93. The pulsus paradoxus is occasionally present in pericardial effusion.

94. Cirrhosis of the liver is sometimes erroneously diagnosed when the real lesion is the presence of pericardial adhesions.

Myocarditis.

95. In the diagnosis of myocardial disease the principal points are the following: Age, family and personal history of the patient, previous illnesses; symptoms—dyspnœa on slight exertion, cardiac pain (sometimes anginal in type), syncopal or epileptiform seizures, general weakness; the obscurity of the physical signs in comparison with the symptoms; the results of instrumental methods of examination and of the various exercise tests; the characters of the pulse; the progress of the case and the relatively small response to treatment.

96. In the diagnosis of myocardial disease the disproportion between well-marked symptoms and ill-marked signs possesses great significance.

Tests of Cardiac Efficiency.

97. The best test of cardiac efficiency is what the heart can do without exciting serious symptoms.—*Mackenzie.*

98. The following rules for estimating myocardial efficiency are useful: Make the patient raise his body-weight (stair or chair) 20 feet in thirty seconds.

(*a*) Good reaction.
Pulse, blood-pressure, and respiration increase on exercise, but return to the normal in three minutes.

(*b*) Fair reaction.
Pulse, blood-pressure, and respiration increase on exertion, but do not return to the normal in three minutes.

(*c*) Bad reaction.
The blood-pressure fails to rise, although pulse and respiration go up.

(*d*) Very bad reaction.
Pulse and respiration increase, but the blood-pressure actually falls.

Examination of the body at rest affords no opportunity of estimating the reserve force of the heart.—*Mackenzie.*

Malignant Endocarditis.

99. Malignant (ulcerative) endocarditis is commoner than has been usually supposed. Cases of moderate or slight severity are often overlooked. The most trustworthy points in the diagnosis of this condition are: The presence of old valvular disease; the development of new murmurs and of cardiac dilatation; the type of pyrexia; a fast, weak pulse; anæmia; enlargement of the spleen; albumin or blood in the urine. Embolic phenomena are inconstant. Clubbing of the fingers occurs. Malignant endocarditis may exist without murmur. The distinction of malignant (ulcerative) endocarditis from typhoid fever is sometimes difficult. The following points are useful: in malignant endocarditis there is usually pre-existing valvular disease; the onset is more indefinite than in typhoid fever; frontal headache is not marked; the tongue is not characteristic; abdominal signs and symptoms are unusual; anæmia is often marked; there is no characteristic diarrhœa; leucocytosis is the rule, while leucopenia is the rule in typhoid fever.

100. In subacute bacterial endocarditis there are usually present: the *café-au-lait* appearance, pyrexia, petechial spots, enlargement of the spleen.

101. The distinction between thoracic aneurysm and intrathoracic tumour turns largely upon the constitutional condition (better in aneurysm); the circulatory signs (more marked in aneurysm —aortic second sound usually accentuated); the results of X-ray examination; the course of the disease (more rapid in tumour).

102. It is easy to recognise congenital heart disease, but difficult to determine its precise nature, as the lesions are often multiple.

Cardiac Neuroses.

103. Cardiac neuroses are part of a general neurosis.—*Clifford Allbutt.*

104. In cardiac neuroses the cause is in the nervous or the digestive system, not in the heart.

105. Cardiac neuroses are relatively rare in children; they are much commoner in women than in men; they are common in adolescence and early adult life; they are rare after fifty.

106. The " nervous heart " of soldiers is seldom due to muscular strain; sometimes to various infections; oftenest to emotional stress and psychical disturbance.

Prognosis in Heart Disease.

107. Give your prognosis in heart disease on the best suppositions; treat your patient on the worst.—*Clifford Allbutt.*

108. A good prognosis is the best of tonics for a cardiac patient.

109. Prognosis in heart disease depends mainly on the state of the heart muscle, and upon the completeness or incompleteness of compensation.

110. Cardiac signs without cardiac symptoms warrant a good prognosis.

111. Women, upon the whole, bear valvular lesions better than men.

112. Children, upon the whole, bear valvular lesions badly.

113. Marriage is not free from risk for women who are the subjects of mitral stenosis or of aortic regurgitation, but the prohibition is not absolute. A general survey of all the facts of the case must determine opinion. Mitral regurgitation is a less serious obstacle.

114. Occupation and mode of life have much weight in the prognosis of heart disease.

115. Valvular affections of rheumatic causation offer a better outlook than valvular affections associated with degenerative changes. The latter

are always progressive; the former not necessarily progressive.

116. Rheumatic pericarditis often does well; other forms of pericarditis usually do badly.

117. In the prognosis of heart disease most reliance should be placed upon a careful analysis of symptoms.

118. Mitral insufficiency is the only heart disease which, under favourable circumstances, can be nursed to an indefinite duration.—*Clifford Allbutt.*

119. Mitral stenosis is usually progressive, and the outlook is relatively unfavourable. A large proportion of patients die under forty, but in rare cases the patient may attain the age of fifty or even sixty. The disease is extremely rare at advanced ages.

120. Aortic regurgitation, arising in early adult life and of rheumatic causation, admits of many years of good compensation and fair health. The duration may be prolonged. Cases arising at middle life and associated with vascular degenerations have a doubtful outlook and a limited duration.

121. A first failure of compensation in mitral disease usually admits under treatment of a good

recovery; in aortic disease the first serious failure of compensation is often the beginning of the end.

122. Aortic stenosis is so rare that it is not possible to formulate definite rules of prognosis, but the outlook is believed to be relatively favourable.

123. It is not well to base prognosis in heart disease chiefly upon the nature of a valvular lesion; the extent of the lesion may be more important than its nature.

124. In myocardial disease the prognosis varies within wide limits. It may be fairly good or absolutely bad. It is always somewhat precarious.

125. Mild cases of angina pectoris may, under favourable conditions, go on indefinitely, but sudden death is common and may occur in a first attack.

126. In rare cases the physical signs of organic valvular disease disappear. This event is almost, or altogether, confined to cases of mitral regurgitation.

127. In heart disease the following symptoms are of grave significance and demand a cautious prognosis: much dyspnœa on slight exertion or independent of exertion; cyanosis; general dropsy; marked congestion or œdema of the lungs; angi-

noid and syncopal attacks; profuse hæmoptysis; a weak, frequent, irregular pulse; Cheyne-Stokes respiration. Persistent orthopnœa usually indicates that the end is not far off.

128. Slight hæmoptysis is not necessarily unfavourable in heart disease, and may be salutary.

129. Albuminuria is not necessarily of serious import in heart disease. If the heart improves, albuminuria usually disappears and leaves the kidneys undamaged. There is little impairment of the excretory functions of the kidneys in passive congestion.

130. The response to treatment is a fundamental point in the prognosis of heart disease. Intolerance of digitalis is a serious handicap.

131. A short first sound followed immediately by the second sound is of evil augury.

132. Sudden death is relatively common in heart disease of syphilitic causation. It is rare in mitral disease; Leyden puts the proportion at 2 per cent.

133. Vomiting and cyanosis are of grave augury in pericarditis.

134. Persistent insomnia in heart disease renders the prognosis serious.

135. Prognosis in heart disease should be cautious until the effects of exercise and exertion have been tested.

136. It may be laid down as an axiom that all hearts with a normal rhythm, in which there are present slowly advancing changes, recover from their first attack of failure, if rested. The recovery, however, may be limited in degree where serious damage is present.—*Mackenzie.*

137. Conditions which justify a favourable prognosis in valvular lesions: General good health; regular habits; no exceptional liability to rheumatic or catarrhal affections; origin of valvular affection independent of degeneration; existence of lesion without change for at least three years; sound ventricles of moderate frequency and general regularity of action; sound arteries with a normal amount of blood through the cervical veins; freedom from pulmonary, hepatic and renal congestion.—*Andrew Clark.*

Cardiac Arrhythmia.

138. We should speak of the " tone " and not of the " tension " of the arteries.—*Clifford Allbutt.*

139. Cardiac arrhythmia is one of the commonest of conditions, and has many explanations. It is common both in functional and in organic

conditions. Instrumental methods are important and helpful, but the full significance of arrhythmia can only be understood by a careful review of all the facts and the attendant circumstances.

The patient is more often conscious of cardiac arrhythmia in functional than in organic conditions.

The following forms of arrhythmia are of grave significance: Pulsus alternans, pulsus paradoxus, gallop rhythm, the more serious forms of heart block.

140. Cardiac arrhythmia in childhood and early youth, apart from a history of recent infective disease and signs of organic heart disease, is usually of the sinus type, and may be neglected.

141. Extra-systoles are usually functional, and free from danger, but are sometimes present in arterio-sclerosis, less frequently in valvular disease.

142. Auricular fibrillation has a variable but somewhat unfavourable outlook. Some cases involve a grave forecast, other cases last for years with maintenance of fair health.

143. In enquiring for auricular fibrillation, it is important to compare the apex-rate of the heart with the pulse-rate. The greater the discrepancy between the two, the greater the degree of ventricular exhaustion.

144. Auricular fibrillation is due to the varying conducting power in the muscular fibres and strands of the auricular wall, whereby the excitation wave is broken up and travels along sinuous and varying paths, re-entering fibres through which it has already travelled.—*Lewis.*

145. When auricular fibrillation and symptoms of heart failure arise in connection with aortic disease, a rally is improbable.—*Mackenzie.*

146. If there is constant quickening of the pulse during deep inspiration, auricular fibrillation is not present.—*Lewis.*

147.—If the pulse frequency is over 120 and irregular, or can be induced by any means to beat at such rate and remain irregular, auricular fibrillation is present.—*Lewis.*

147*a*.—Auricular flutter may continue unceasingly for seven years or longer.—*Lewis.*

148. In cases of sinus arrhythmia, the arrhythmia disappears with acceleration of the pulse or in the presence of pyrexia, or when the breath is held.

149. Heart block in young subjects is usually rheumatic in causation and moderate or slight in degree. In the elderly it is usually due to degenerative changes in the A.-V. node and bundle, and involves a variable, but often grave, outlook. With care and a suitable mode of life,

many cases last for a long period of years, but sudden death is common.

150. Pulsus alternans is the faint cry of the anguished and failing ventricle for help, which all should strain to hear, for it is not long repeated. —*Lewis.*

151. Gallop rhythm has various causes. It indicates muscle failure and involves a grave outlook, but under favourable conditions may last for years. It is usually due to reduplication of the first sound.

152. Arrhythmia in organic disease of the heart involves a mortality two or three times as great as when the rhythm is normal.—*W. Hale White.*

153. Pulsus paradoxus—the pulse falling away during inspiration—is found most frequently in pericarditis, pericardial adhesions, and mediastinal tumour.

Blood-Pressure.

154. High blood-pressure is the shadow of troubles to come. It may, however, exist for years with the preservation of good health.

155. High blood-pressure is more ominous in the young than in the old.

156. When high blood-pressure is of gradual development it is rarely good practice to attempt to lower it. The effect of vaso-dilators is transient.

Purgation, diaphoresis, and low diet may have some effect, but when the pressure falls the patient often feels worse.

157. Trivial as an intermittence of the pulse may be in a healthy heart, it is of grave significance in aortic regurgitation, as grave as in pneumonia or enterica.—*Clifford Allbutt.*

158. Bradycardia is a superfine name to denote slow pulse; it connotes nothing.—*Clifford Allbutt.*

159. Bradycardia may be constitutional; may be toxic; may depend on heart block, cerebral disease, mere debility, or other causes. Prognosis depends on cause.

160. Irritable aorta may simulate abdominal aneurysm, but it occurs chiefly in neurotic females, in whom abdominal aneurysm is extremely rare; no saccular distension of the aorta can be made out and atheroma is usually absent.

161. A capillary pulse is sometimes present in pyrexia and in anæmia. A jerking, capillary, and visible pulsation may be present in arterial degeneration apart from aortic disease.

Treatment of Heart Disease.

162. Tell a cardiac patient to find out what he can do and do it; tell him to find out what he cannot do and never do it.—*Clifford Allbutt.*

163. Cardiac cases should avoid occupations involving sudden effort, lifting heavy weights, constant use of the arms; occupations such as dusty trades which tend to pulmonary affections; occupations involving much nervous strain.

164. Any exercise which a cardiac patient can take without causing breathlessness, pain, or general distress will do him good.

165. Rest is the fundamental indication in heart disease in the presence of active symptoms. The value of exercise comes later.

166. Digitalis is the sheet-anchor in the treatment of valvular disease with failing compensation. It is most valuable in the presence of auricular fibrillation with rapid, weak, irregular pulse and dropsy. It is rarely of service if the pulse frequency is normal or nearly normal. It is contra-indicated when the pulse frequency is below normal. It is not of service in the presence of arrhythmia without signs of ventricular weakness. It is of relatively little value "when the heart is in the grip of a toxin" (Mackenzie.) It is useless in arrhythmia depending on reflex irritation from other organs. It is of little value in cardiac emergencies. It is of little value in myocardial disease. It is not contra-indicated by high arterial tension. Some patients take it

uninterruptedly for years with benefit, but it is usually advisable to intermit its use from time to time. The danger of accumulation has been exaggerated, but must not be forgotten.

167. If a patient shows signs of intolerance of digitalis, reduce the dose and try some combination, such as Guy's pill. If these measures fail, omit the drug for a week or two and give a few doses of calomel and salines, then resume. Permanent intolerance is rare.

168. Digitalis does not normally increase the blood-pressure.

169. Where there are signs of failing compensation with rigid arteries, a combination of digitalis, iodide of potash, and trinitrin is often useful.

170. Corrigan's view that digitalis is contra-indicated in aortic regurgitation as tending to prolong diastole and increase the reflux overlooks the fact that the increased force of systole brought about by the remedy may more than counterbalance the disadvantage of prolonging diastole. But if the mitral valve remains intact, digitalis is of little service in aortic regurgitation.

171. In aortic regurgitation without mitral involvement one of the best combinations is iodide and bromide of potash.

172. Strophanthus sometimes succeeds where digitalis fails, but this is rare. In severe heart failure the intravenous injection of strophanthin may be tried.

173. Quinidine sometimes arrests auricular fibrillation, but its employment requires caution.

174. A patient under digitalis medication requires supervision, as the drug sometimes acts quickly and the dose may require to be reduced.

175. Nativelle's granules are a convenient and often successful method of administering digitalis.

176. Morphia is, next to digitalis, the most indispensable remedy in the treatment of severe heart disease.—*Strümpell.*

177. Oxygen is of more value in heart disease than in pneumonia.

178. In cases of heart disease with failing compensation, the ideal diet is a light proteid diet, with limitation of carbohydrates and of fluids, but if dyspepsia is marked the temporary use of a fluid diet, or of a pure milk diet, is advisable.

179. Regulated exercises, under medical supervision, are of great service in some forms and stages of heart disease.

180. The Nauheim baths have had a vogue beyond their merits, but have proved of service

in some cases of functional heart disease and in some cases of commencing failure of compensation.

181. The treatment of myocardial disease should be general and constitutional, not cardiac.

182. The treatment of high blood-pressure is a régime, not a drug.—*Huchard.*

183. In the treatment of cardiac neuroses the first rule is to neglect the heart. Regulate the digestion, or quiet the nervous system, or cure anæmia, if anæmia is present. A confident prognosis helps the cure.

Angina Pectoris.

184. The primary seat of the pain in angina pectoris is in the large majority of cases substernal, generally under the upper third of the bone. In a few cases it falls to the lower sternum or the epigastrium.—*Clifford Allbutt.*

185. The coronary arteries and the myocardium have nothing to do with the pain of angina, but much to do with its mortality.—*Clifford Allbutt.*

186. In angina the heart's action is not disturbed at all, or shows no more than a slight vagus retardation. Dyspnœa is not a feature.—*Clifford Allbutt.*

187. Death in angina is due ordinarily to vagus inhibition—*i.e.*, to the shock of the pain.—*Clifford Allbutt.*

IV.—THE DIGESTIVE SYSTEM

Dyspepsia.

1. Dyspepsia is usually dependent on some of the following causes: Errors in diet, imperfect mastication, oral sepsis, nervous exhaustion, disease of organs other than the stomach.

2. The stomach is the most sympathetic of organs. In nearly all abdominal affections it shows abnormalities of secretion and of function. —*Moynihan.*

3. In the presence of the gastric syndrome—viz., discomfort during digestion, pain, vomiting, etc.—the first question should be, Is the stomach primarily at fault, or disturbed by disorder of some other organ—liver, gall-bladder, pancreas, bowels, appendix, heart, lungs, nervous system ?

4. If disorder of organs other than the stomach can be excluded, the next question is, Is the gastric affection functional or organic ?

Appetite.

5. Impairment of appetite is usual in atonic dyspepsia (hypochlorhydria), acute and chronic

gastritis, dilatation of the stomach, gastric cancer. It is often good in hyperchlorhydria, and in gastric ulcer, unless gastric catarrh coexists.

6. A somewhat sudden distaste for food, especially for meats, accompanied by symptoms of irritative dyspepsia, arising in a patient at or after middle life without obvious cause, should lead to enquiry for gastric cancer.

7. A total failure of appetite with rapid wasting is the characteristic feature of achylia gastrica.

8. Excessive appetite suggests diabetes or neurosis.

9. A morbid craving for food is found in some cases of gastritis, irritative dyspepsia, hyperchlorhydria, certain neuroses, and diabetes.

10. Idiosyncrasy as regards food may be genuine, but is sometimes only a bad habit. It is often found as regards shell fish, eggs, and mutton.

11. If a patient has a craving for food which is soon satisfied, suspect gastritis. If a patient has no appetite, but *l'appétit vient en mangeant*, suspect atonic dyspepsia (hypochlorhydria).

Pain.

12. Pain is a common symptom in all forms of gastric disorder—functional and organic.

13. The pain of atonic dyspepsia (hypochlorhydria) comes on a considerable interval after food; it is not strictly localised; it is accompanied by a feeling of distension, borborygmi and gaseous eructations; it is not increased and may be relieved by pressure; it is not accompanied by vomiting; it is relieved by warm water, alkalies, and carminatives.

14. The pain of gastritis comes on soon after food; it is increased by pressure; it is often followed by vomiting; the vomit usually contains mucus.

15. The pain of gastric ulcer comes on from a few minutes to an hour, or an hour and a half, after food; it is often very severe; it increases to a maximum and then gradually subsides or is relieved by vomiting; it is much affected by the quality of the food; it is often felt in the back about the level of the twelfth dorsal vertebra to the left of the spine, or a little above or below this point. There is usually a limited area of tenderness in the epigastrium. Nocturnal pain is rare.

16. The pain of duodenal ulcer usually comes on from one and a half to three hours after food; it is often relieved by food; it is sometimes marked in the early hours of the morning; it is not usually accompanied by vomiting; melæna or "occult

blood" in the motions is common. There is often an area of tenderness a little to the right of the middle line, below the level of the epigastrium. The careful analysis of pain is in many cases sufficient to found a diagnosis.

Gastric Neuroses.

17. The pain of gastralgia (gastric neurosis) is often very intense; superficial; not definitely localised; sometimes relieved by pressure; not definitely related to the quality or ingestion of food; may be severe when the stomach is empty; may or may not be accompanied by vomiting.

18. Gastric neuroses are most common in nervous women, neurasthenic youths, and harassed, overworked people at middle life.

19. Gastric neuroses may give rise to the most obstinate perversions of secretion and motility, which resist dietetic treatment and measures directed to the stomach, but respond to measures which improve nervous tone. The patient can sometimes dispose of the most indigestible articles of food. The general nutrition is often well maintained.

Vomiting.

20. Painless vomiting in a feverish child should lead to enquiry for meningitis or uræmia.

21. Vomiting is common at the outset of scarlet fever, pneumonia, and appendicitis. It is rare at the outset of typhoid fever.

22. Cerebral vomiting is painless, often violent ("projectile"), unaccompanied by nausea, not definitely related to food. The tongue is often clean, and there is an absence of gastro-intestinal symptoms. The vomit does not show distinctive signs of gastric disorder.

23. In all cases of vomiting examine the abdomen, and do not neglect also to examine the thorax. In all cases of periodic vomiting test the knee-jerks and examine the pupils. In the presence of vomiting the first question should be, Is there any irritant in the stomach?

24. Spinal caries is an occasional cause of gastric disturbance.

State of the Tongue.

25. The state of the tongue should be carefully studied. The following types of tongue possess diagnostic importance:

(*a*) The pale, moist, flabby, slightly furred tongue, indented by the teeth, in atonic dyspepsia (hypochlorhydria). "Large flabby tongue, large flabby stomach."

(*b*) The red, furred tongue, pointed at the tip, papillæ prominent, in gastritis.

(*c*) The red, raw tongue, denuded of epithelium, in ulceration of the bowels.

(*d*) The white strawberry and the red strawberry tongue in scarlet fever.

(*e*) The dry tongue in severe cases of typhoid fever.

Hæmatemesis.

26. Profuse hæmatemesis, occurring for the first time and with little warning, is most often due to cirrhosis of the liver.

27. In profuse hæmatemesis, pallor precedes the bleeding; in profuse hæmoptysis pallor follows the bleeding.

27*a*. Even the most profuse hæmatemesis is very rarely fatal. In a large majority of cases the following treatment will suffice: Secure complete rest; give no food of any kind by the mouth for twenty-four to forty-eight hours; put an ice-bag on the epigastrium; give an injection of morphia; give a few minims of adrenalin *per os*. Horse serum is worthy of a trial in obstinate cases.

Splashing.

28. Splashing is common in the stomach for several hours after meals, but it is confined to

the upper abdomen. Heard below the umbilicus at any time, or in any part of the stomach area four, five, or six hours after the last meal, or after a night's rest, it suggests dilatation of the stomach, or prolapse of that organ.

29. The cardiac sounds, especially the second sound, are heard all over the area of resonance proper to the stomach, with a characteristic tympanitic consonance, which is lost the moment the stethoscope passes from the stomach to the colon.—*Broadbent.*

30. There is a type of dyspepsia of doubtful pathology which is sometimes denominated "hepatic." It is characterised by distaste for food, nausea, a brassy taste in the mouth, flatulence, irregular bowels, ill-smelling motions, sometimes a tinge of jaundice. This condition is relieved by a restricted diet, small doses of calomel, alkalies, and bitter tonics.

31. A large proportion of cases of functional dyspepsia are curable by regulation of the diet, attention to the teeth, and careful mastication.

32. In the general treatment of dyspepsia, more benefit results from the administration of acids, alkalies, aperients, and general tonics, than from the administration of drugs of the pepsin, pancreatin class; or those of the salol, sulpho-

carbolate of soda, creosote, salicylate of bismuth class.

Atonic Dyspepsia.

33. Alkalies before meals and dilute acids after meals are both useful in atonic dyspepsia (hypochlorhydria). There is much difference of opinion amongst physicians as to their relative value. Remedies of the pepsin, pancreatin class are much less in favour than formerly.

34. In the treatment of atonic dyspepsia (hypochlorhydria) the diet should consist largely of light proteid material, tender meats, poultry, fish, game, eggs. Carbohydrates should be taken very sparingly. The food should be sapid and daintily prepared, so as to promote appetite. Little or no fluid should be taken with the principal meal. Tea and coffee should be restricted or withheld. Frequent small meals are advisable. Constipation should be corrected.

Hyperchlorhydria.

35. In the treatment of hyperchlorhydria the diet should be simple and devoid of rich, savoury or stimulating articles. Soups and meat extractives should be withheld. Common salt should be restricted. Most cases do best on a diet of proteins (largely vegetable) with a good deal of fatty

matters. Other cases do best on a diet of milk, eggs, cream, butter, jellies, and carbohydrates. Fluids should be taken sparingly. Stewed fruits, honey, and marmalade may be allowed.

36. Fermentative dyspepsia calls for the exclusion or strict limitation of starchy foods.

37. In dealing with flatulent dyspepsia do not forget that some people swallow air with the saliva.

38. Fats are badly borne by many dyspeptics. The safest form of fat is good fresh butter.

39. The cruciferæ should be banned in many cases of dyspepsia.

39*a*. Dine on a chop and a "hunk of bread" —advice to a dyspeptic.—*Andrew Clark.*

40. In all cases of dyspepsia, examine the teeth and send many patients to the dentist.

40*a*. Dyspeptics do better in upland air than at the seaside.

41. Chronic gastritis, independent of disease of organs other than the stomach, is usually due to dietetic errors or to alcohol. The absence of these factors should lead to a reconsideration of the diagnosis.

Gastric Ulcer.

42. Gastric ulcer is a medical disease. In recurrent cases and in the presence of signs of

obstruction the aid of surgery should be invoked. —*A. B. Mitchell.*

43. The cardinal symptom of gastric ulcer is pain, characteristic as regards quality, seat, relation to food, radiation, causes of intensification or relief. Vomiting and hæmatemesis are common, but are absent, one or both, in a considerable proportion of cases.

44. In the treatment of gastric ulcer the most important points are: Prolonged rest ("rest the stomach, rest the patient"); the continuous alkalinisation of the gastric contents; the administration, according to stage, of bland, unirritating food (milk, eggs, farinaceous articles; later, scraped meat, etc.). Fats should be given in the form of cream or yolk of egg. It may be advisable to empty the stomach at bedtime so as to prevent the accumulation of acid during the night. Too long insistence on a purely milk diet may impair the patient's nutrition and powers of repair. Oils and fats are usually well borne.

The methods of Lenhartz and Sippey are worthy of attention.

45. The proportion of cases of gastric ulcer which ultimately become malignant is still undetermined. The proportion is put much higher by surgeons than by physicians.

46. In cases of gastric ulcer, there is often an absence of wasting because the patient has recourse to foods—milk, eggs, farinaceous articles—which fatten.

47. The large majority of cases of gastric ulcer get well under rest and medical treatment. Cruveilhier thought that 80 per cent. get well. Relapse, however, is common.

Gastric Cancer.

48. In the early diagnosis of gastric cancer, the most important points are the following: Age, history, origin of irritative gastric symptoms without assignable cause, early loss of appetite, progressive loss of weight, secondary anæmia, progress of the case, absence of response to treatment. Pyrexia is occasionally present. A tumour ultimately develops.

49. Gastric cancer may simulate pernicious anæmia, and the blood conditions of the two affections are sometimes difficult of differentiation.

50. The early history of gastric cancer is one of painful dyspepsia without obvious cause and resistant to remedies, or of progressive failure of health with impaired digestion and loss of weight: or of chronic ulceration of the stomach; or of the development of a progressive secondary

anæmia. Time is of great importance in the diagnosis. Other conditions are relatively responsive to treatment; gastric cancer is not responsive. Progressive loss of weight is very significant.

51. In cases of gastric cancer, palpation gives a very erroneous impression of the size of the tumour, if a tumour is present.

52. Much caution is necessary in appraising the results of the chemical examination of the gastric contents. A single examination may be quite misleading. Free HCl is usually absent or much reduced in cases of gastric cancer, but there are exceptions to this rule. Free HCl is absent in many cases of chronic gastritis, achylia gastrica, pernicious anæmia, and Addison's disease. The fractional method of examination should be employed.

53. In some cases of cancer of the stomach the pylorus gapes and X-rays show rapid emptying.

54. If a patient has never had melæna or bright blood in the stools, but gives on three separate occasions a positive result with the test for occult blood, there is probably malignant disease of the alimentary tract.—*Langdon Brown.*

Dilatation of the Stomach.

55. The test of dilatation of the stomach is the result of washing out the organ six hours

after a meal. The stomach in which food stagnates is dilated.

56. In dilatation of the stomach, attacks of gastric tetany may come on after severe vomiting or lavage, and are very ominous.

57. In the treatment of dilatation of the stomach the failure of gastric motility must be borne in mind. Frequent small meals in an easily assimilable form are indicated. Fluids should be restricted, but an absolutely dry diet is not advisable. Support to the abdomen is useful. Cohnheim recommended the use of olive oil.

58. Inflation of the stomach should not be practised if there has been recent hæmorrhage, or in the presence of gastric ulcer, or in debilitated subjects, or if cardiac action is weak.

Gastric Catarrh.

59. In infants acute catarrhal affections of the stomach are common, but in infancy the intestines share more in the catarrh than at a later period of life.

60. For the dyspepsias of childhood milk and carbohydrates are often responsible.

61. Every case of acute catarrh of the stomach has a natural tendency to heal of its own accord,

unless a chronic form is produced by a mistaken diet or wrong medication.—*W. Osler.*

62. Of the gastric disorders of children, ulcer, cancer, pyloric obstruction, and dilatation are very rare. Disorders of secretion, especially hyperchlorhydria, are very common, as are also disorders of motility. Gastralgia is not uncommon. The intestines are often simultaneously involved.

63. Intestinal colic can often be distinguished from other causes of abdominal pain by the fact that the pain is relieved by pressure.

64. In recommending a diet of milk do not forget its richness in lime salts.

The Liver.

65. The hardest livers are those due to cancer and lardaceous disease. The syphilitic and the cirrhotic (alcoholic) livers come next. The liver of passive congestion is firm rather than hard. The fatty liver is soft. The hydatid liver and the liver which is the seat of abscess sometimes fluctuate.

66. An irregular surface of a large liver suggests cancer, cirrhosis, syphilis, tropical abscess, or hydatid cyst. The malignant liver may be smooth on the upper surface, nodular on the under surface.

67. In palpating the liver proceed from below upwards.

Jaundice.

68. The causes of jaundice are three—viz., hepatic insufficiency, obstruction, hæmolysis.—*Brulé.*

69. Jaundice is easily overlooked by artificial light.

70. A tinge of jaundice is more easily detected in a fair-skinned person than in one of dark complexion.

71. Bile appears in the urine a day or two before there is any manifest jaundice.

72. A painless, persistent, obstructive jaundice in an elderly person should lead to enquiry for a new growth of the pancreas, especially if the gall-bladder is distended.

73. Recurrent jaundice is probably due to gall-stones.—*S. Gee.*

74. Cases of feigned jaundice can be readily detected by observing the absence of bile pigment from the conjunctivæ and from the urine.

Cancer of the Liver.

75. Pain and tenderness are the rule in cancer of the liver, but may be absent if the growth is deep-seated in the substance of the organ.

76. Jaundice and ascites are common accidents, rather than essential signs, of cancer of the liver. Some observers find jaundice rather more frequent than ascites. Jaundice, if present, is usually marked, and rarely fluctuates in intensity. Ascites, if present, is usually moderate in amount.

77. The distinction of cancer of the liver and portal cirrhosis is sometimes difficult. The most useful points are the following: History of the patient's previous health and habits, the mode of onset of the disease, the amount of jaundice present (absent or marked in cancer, usually present but not marked in cirrhosis); the amount of ascites present (slight, moderate, or absent in cancer, usually present and often large in cirrhosis); the condition of the gall-bladder and of the spleen; the state of the general health and the progress of the case.

78. In cases of jaundice at or after middle life, if gall-stones and cirrhosis of the liver can be excluded, cancer of the liver, gall-bladder, or pancreas is probably present.

Gall-bladder Disease.

79. Gall-bladder disease is common, and is often overlooked.

80. A distended gall-bladder is pear-shaped, smooth, enlarges downwards and forwards in a

line which, drawn from the ninth or tenth right costal cartilage, crosses the *linea alba* a little below the umbilicus. If the liver be of normal size, the neck of the gall-bladder is opposite the ninth right costal cartilage; if it be enlarged, the neck of the tumour may be opposite the umbilicus or below this point. A distinct sulcus can usually be felt between the liver and the gall-bladder. Fluctuation in the tumour is rare owing to the tension of its contents.

81. The gall-bladder is usually distended in cancer of the liver; not distended in gall-stones.—*Courvoisier's Rule.*

(This rule is useful, but there are exceptions to it.)

82. It is generally held that a diet rich in sugar and in fats tends to the production of gall-stones, and that a diet rich in proteids, by increasing the formation of bile acids which dissolve cholesterin, has the opposite effect. The question of the microbic origin of gall-stones is still *sub judice.*

83. Gall-stones and cancer of the gall-bladder are often associated. It is doubtful which is the primary condition. Existing evidence seems to favour the view that gall-stones are usually primary, but the question is not definitely settled.

84. Biliary colic is sometimes mistaken for ruptured gastric or duodenal ulcer. The history of these cases is different. Examination of the urine for the presence of bile may give the required hint.

85. In the preventive treatment of gall-stones the principal points are the following: Dietetic regulations—five small meals daily, the free use of green vegetables and fruit; milk in moderation; a moderate allowance of proteid foods; the exclusion or limitation of articles rich in sugar, starch, cholesterin, or lime salts; plenty of fluid; the avoidance of hard water; the use of aperients as may be required. Exercise should be encouraged.

Acholuric Jaundice.

86. In the diagnosis of acholuric jaundice the most important points are the following: Family history, the characters of the blood, the condition of the general health, the progress of the case. Splenectomy has had a considerable degree of success in these cases, but is not usually required.

The Pancreas.

87. The following are the most trustworthy signs of pancreatic insufficiency:

(*a*) Fatty stools, without jaundice, the unsaponified fats being in excess.
(*b*) The presence of muscle tissue in the stools
(*c*) Increase of diastase in the urine.
(*d*) Glycosuria.
(*e*) Loewi's adrenalin test.

The value of some of these tests is still under discussion.

Constipation.

88. Constipation of the ordinary atonic type is often a bad habit, aggravated by a faulty diet, too little fluid, and the constant use of aperients.

89. The treatment of chronic constipation of atonic type is mainly dietetic. Porridge, brown bread, wholemeal bread, oatcake, salads, cresses, and fresh fruit are useful. Milk foods and meats should be taken sparingly or omitted for a time. Plenty of fluid between meals is advisable. Means to brace up the abdominal muscles should be devised. Aperients should be avoided as much as possible. Regular evacuations should be aimed at. Paraffin preparations are helpful. Nux vomica is the best routine remedy.

90. Spastic constipation is a rare condition. It may depend upon reflex irritation from the uterus, prostate, anus (fissure, hæmorrhoids,

proctitis). It is often of nervous causation, and found in association with hysteria, neurasthenia, or hyperchlorhydria. Portions of the bowel may form hard cord-like masses which can be felt. Belladonna, enemata of warm olive oil, and general tonic and hygienic measures are useful.

91. Obstinate constipation in elderly patients should lead to enquiry for malignant disease of the bowel.

Diarrhœa.

92. In cases of diarrhœa the first question should be: Is there any irritant in the bowels?

93. Diarrhœa has many causes: errors in diet, chill, many infective diseases (dysentery, cholera, typhoid fever, pyæmia, sprue); ulceration of the bowels; amyloid disease of the bowels; neurosis.

94. "Nervous" diarrhœa has the following characters: The patient is usually neurotic; the motions are relatively normal in character; attacks are much under psychical influence; there is a tendency to early return to the normal; relapse is common.

95. In many cases of diarrhœa milk is ill borne, and better results are obtained by a diet of jellies, flours, eggs, fish, cream, and butter. Later, meat and a purée of potatoes may be tried.

Mucous Colitis.

96. Mucous colitis is probably a "secretion neurosis" and non-inflammatory. Van Noorden recommends a coarse rich diet—brown bread, porridge, leguminous vegetables, fruits—leaving plenty of residue; frequent small doses of castor oil; general tonic, hygienic, and supporting measures. Boas recommends a middle course between "rough" and "bland" diets, olive oil, and paraffin, and bans aperients. The constitutional state demands much attention. Colectomy has some successes, but more failures.

97. Mucous stools occur in colitis, acute intussusception, intestinal obstruction, rectal disease, chronic constipation, and in the presence of certain parasites.

98. Some cases of diarrhœa do best on small doses of Carlsbad salts. Lienteric diarrhœa is relieved by small doses of opium before meals. Arsenic and nux vomica are sometimes useful.

Epidemic Diarrhœa.

99. The following is the treatment of epidemic diarrhœa of infants and young children:

(*a*) Remove the child from the surroundings where the disease was contracted, and secure efficient hygiene.

(*b*) A preliminary fast, the duration of which depends upon the child's strength and the progress of the case.

(*c*) Means to make good the dehydration, either by fluid *per os* or by salines given subcutaneously or intraperitoneally.

(*d*) The regulation of the diet—albumin water, plain boiled water, barley water, rice water, veal tea, chicken broth, skimmed milk with the addition of lactose, diluted malted milk. These articles to be adjusted to the stage of the disease and the patient's response.

Brandy in doses of 15 to 20 minims every four hours may be required.

Fats must be excluded.

(*e*) Castor oil and bismuth mixtures may be used at discretion. Opium and intestinal disinfectants are contra-indicated.

The Acute Abdomen.

100. In cases of the "acute abdomen," think first of appendicitis, which accounts for more than two-thirds of the cases; next of intestinal obstruction and of perforation. Amongst the rarer causes are cholecystitis and twisting of a pellicle. The rarest cause of all is acute pancreatitis.

V.—THE NERVOUS SYSTEM

1. The nervous system is at bottom the whole animal. Other systems exist to protect it, to nourish it, to cleanse it.—*Cuvier.*

2. The nervous system is of relatively late phylogenetic development; hence, it is less stable than the other systems—circulatory, digestive, excretory, generative.

3. The influence of heredity in the causation of nervous disease is potent. It is more potent in so-called functional than in organic disease. Its influence is marked in the causation of hysteria, epilepsy, insanity, neurasthenia, alcoholism. It is an important factor in the causation of some of the myopathies. On the other hand, in some of the most important diseases of the nervous system—viz., myelitis, tabes dorsalis, general paralysis of the insane, hemiplegia, peripheral neuritis—its influence is slight or absent. In such conditions other factors, especially syphilis, alcohol, vascular degeneration, or renal disease, come into play.

4. Heredity is often the predisposing cause, other factors the determining cause, in the genesis of nervous disease.

5. The intermarriage of members of neurotic stocks is an important factor in the causation of nervous disease, especially of epilepsy, hysteria, neurasthenia, insanity.

6. Syphilis is the most potent influence in the causation of nervous disease. It accounts for tabes dorsalis and general paralysis of the insane; for a large proportion of cases of myelitis; for most cases of multiple paralysis of the cranial nerves; for many cases of thrombosis of the cerebral arteries; for some cases of meningitis and cerebral tumour (gumma).

Syphilis does not appear to possess any significance in the following nervous diseases: Disseminated sclerosis, paralysis agitans, progressive muscular atrophy, amyotrophic lateral sclerosis, the muscular dystrophies, syringomyelia, Landry's paralysis, Friedreich's ataxia.

7. In advanced age many nervous affections are related to vascular degenerations.

8. The following nervous diseases are common in childhood: Acute poliomyelitis, tubercular meningitis, cerebrospinal meningitis, hydrocephalus, chorea, spastic diplegia, some forms of

muscular atrophy, tubercular tumour of the brain. The following diseases are rare in childhood: Tabes dorsalis, general paralysis of the insane, myelitis (other than acute poliomyelitis), peripheral neuritis, tetanus.

9. A history of the following conditions in youth shows a predisposition to neurosis: Frequent headaches, cramps, gastric disturbance, fainting fits, vertigo, somnambulism, night terrors, incontinence of urine, migraine.

10. Males are more liable to nervous diseases depending on syphilis, traumatism, alcohol, and other chemical poisons. Chorea is three times more common in females. Tabes dorsalis, general paralysis of the insane, and delirium tremens are much commoner in males; alcoholic dementia is commoner in females. Hysteria is much commoner in females. Neurasthenia is commoner in males. Statistics differ as to the sex ratio in disseminated sclerosis.

11. An abrupt onset in nervous disease suggests hæmorrhage, embolism, or traumatism. A rapid onset suggests inflammation. A very gradual onset suggests sclerosis, muscular dystrophy, or new growth. In thrombosis the onset may be sudden, but usually there are premonitory symptoms.

12. In enquiry into the causes of nervous disease the influence of concealed alcoholism, the drug habit, and sexual irregularities must not be overlooked.

13. Patients, either from forgetfulness or design, often supply an erroneous history—family and personal—in nervous diseases.

Hemiplegia.

14. In hemiplegia the parts most usually associated with their fellows of the opposite side suffer least; those least associated with their fellows of the opposite side suffer most—thus the usual rule is "face least, arm most."—*Broadbent's Law.*

15. It was a very old clinical observation that when the leg is more paralysed than the arm the case is relatively unfavourable. The reason is now known—viz., the lesion in such cases is far back in the posterior limb of the internal capsule, and near "the sensory crossway."

16. Hemiplegia with loss of consciousness generally signifies cerebral hæmorrhage.—*Hughlings Jackson.*

17. Hemiplegia with loss of consciousness sometimes depends upon vascular occlusion, but if the coma is of the "ingravescent" type hæmorrhage may be inferred.

18. If temporary hemiplegia comes on after progressive epileptiform seizures, syphilitic disease of the cortex is present.—*Hughlings Jackson.*

19. In attacks of hemiplegia occurring at middle life, enquire for syphilitic thrombosis of the cerebral vessels.

20. In hemiplegia, when the sound hand is shut, the affected hand also usually closes slightly.—*Hughlings Jackson.*

21. In hemiplegia the respiratory movements are more active on the paralysed side during quiet breathing, but the reverse is the case in forced breathing.

22. In organic hemiplegia the patient swings the paralysed leg in an arc of a circle; in hysterical hemiplegia the patient drags the paralysed limb as if it were dead.

23. Hysterical hemiplegia has the following characters: It occurs usually in a hysterical patient; it develops slowly and without loss of consciousness; it may or may not be preceded by emotional shock; the paralysis is in most cases confined to the arm and the leg, the face usually escaping; in the affected parts the paralysis is complete, and there is no selective distribution, such as is common in organic cases; the paralysis

may be either flaccid or spastic; sensation is usually involved; hemianæsthesia involving head, mucous membranes, and nerves of special sense is sometimes observed; the superficial reflexes are usually active and equal on the two sides, except the plantar reflex, which is usually absent; the deep reflexes are usually active and equal on the two sides; the bladder, rectum, and pupils are normal; ankle clonus is rare; Babinski's sign does not occur.

24. In hysterical paralysis the patient, on attempting to lift the paralysed leg, does not press the other leg down into the bed, as usually happens in organic cases.—*Hoover's Sign.*

25. In hysterical paralysis, if the observer passively flexes the patient's fingers and wrist, there is flexion of the elbow by the patient. This does not occur in organic cases.—*Léri's Sign.*

26. In hysterical paralysis the patient can sometimes move the paralysed limb when the eyes are open, but cannot do so when the eyes are closed.—*Lasègue's Sign.*

27. Hysterical paralysis sometimes assumes a form without known anatomical basis—viz., two legs and one arm.

28. Any preponderance of sensory over motor signs renders a functional diagnosis probable, and

conversely much motor with little or no sensory defect favours an organic lesion.

Tremor.

29. Tremor is the result of imperfect fusing of the normal muscular contractions.

30. Tremor is a succession of similar movements; chorea is a succession of different movements.—*Hughlings Jackson.*

31. Tremor of the tongue is common in many nervous persons when under medical examination.

32. Tremor of the tongue, when marked, suggests alcoholism or general paralysis of the insane.

33. Tremor of the tongue and lips is a prominent and often an early sign of general paralysis of the insane.

34. Intention tremor is rare, but not unknown, in functional nervous disease. It is one of the cardinal signs of disseminated sclerosis.

35. Nystagmus may be regarded as a variety of intention (volitional) tremor. It is probably due to loss of cerebellar control.

Testing Sensation.

36. The testing of sensation is one of the most difficult tasks of the physician. The patient is

sometimes incapable of a correct appreciation of the various tests, and his responses may vary from day to day, or even from hour to hour. Suggestion often plays an important part. The French School holds that hysterical anæsthesia is due mainly to suggestion by the examining physician.

Pain.

37. In enquiring into the subject of pain note the following points:

(1) The character of the pains as described in the patient's own words.
(2) The seat of the pains.
(3) The radiation of the pains.
(4) The time of the pains—constant, intermittent, diurnal, nocturnal—relation to food, exercise, etc.
(5) Sources of aggravation, mitigation, or relief.

38. Neuralgic pains are often very severe, remittent, sometimes markedly periodic, often relieved by warmth and food.

39. The simulated pains of malingerers have the following characters: The malingerer often complains of pain before he can possibly be hurt; he is vague in localising the pain, and varies in his

statements from day to day; there is often an interval between the movement or touch and the expression of pain; there are no corroborative signs of pain, such as quickened pulse or dilated pupils; the expression of pain often ceases when the attention is diverted.

Headache.

40. The causes of headache are many. The majority of cases are toxic or reflex in origin. Of toxic causes the most important are digestive disorders, rheumatism, renal disease, syphilis. Headache is a prominent feature in typhoid fever, pneumonia, and cerebrospinal fever. Of reflex causes, dental caries and ocular defects (especially hypermetropia and astigmatism) are the most important. In late middle life high arterial tension is an important cause of headache. Neurasthenia accounts for some cases. Cerebral tumour and meningitis are important causes.

41. Headache and disease are not far apart. Headache in persons unaccustomed to it is a serious symptom.—*Hughlings Jackson.*

42. In cases of nocturnal headache enquire for syphilis.

43. When a young child complains of headache soon after beginning school, enquire for errors of

refraction, especially hypermetropia and astigmatism.

44. A feeling of weight or tension at the top of the head indicates exhaustion or depression of spirits, and not brain disease.—*Hughlings Jackson.*

45. The headache of renal disease is often suboccipital in seat.

46. Severe pain along the course of a nerve, or a group of nerves, should lead to enquiry for herpes zoster, if no other cause is ascertainable.

47. Meningism is common in many diseases—*e.g.*, pneumonia, typhoid fever. It often leads to an erroneous diagnosis of meningitis.

Delirium.

48. Delirium is of no value in the diagnosis of acute primary brain disorder.—*Hughlings Jackson.*

49. Delirium is the yielding of the healthy brain from fatigue and a want of a proper blood-supply. —*Hughlings Jackson.*

50. In sleepless delirium chloral and opium are useless. Good food and stimulants are indicated. —*Hughlings Jackson.*

51. The distinction of typhoid fever and brain disease is sometimes difficult. The best guide to

diagnosis is search for decisive evidence of the former condition.

52. In tubercular meningitis the condition of the patient is often one of drowsy irritability. In typhoid fever it is usually one of apathy.

Coma.

53. In every case of coma:

(1) Enquire into the mode of onset.
(2) Examine for injury to the skull.
(3) Take the temperature.
(4) Obtain a sample of urine by catheterisation.
(5) Note the condition of respiration, pulse, pupils, reflexes.
(6) Examine for the presence of paralysis.

54. The cause of coma in cerebral hæmorrhage has been variously attributed to:

(1) A sudden rise in the intracranial pressure.
(2) Anæmia of the cortex due to reflex inhibition.
(3) "Shock."

55. The coma of apoplexy or uræmia is often mistaken for alcoholic coma. In the latter the coma is not deep, the patient can usually be roused, there is no paralysis, the pupils present no characteristic changes.

Anæsthesia.

56. Cortical anæsthesia is less profound than capsular. It is more marked at the periphery of the limb.

57. Hysterical anæsthesia is psychic, and often dependent on the patient's impressions rather than on anatomical considerations.

58. Dissociated anæsthesia—loss of the pain and temperature sense, and retention of the tactile sense—is very characteristic of syringomyelia. It is also found in unilateral lesions of the cord, and in lesions of the ponto-cerebellar angle of the pons.

59. When a patient complains of visual troubles, examine the urine, take the blood pressure, and test the reflexes.

60. In the following diseases there are no objective sensory signs: Progressive muscular atrophy, amyotrophic lateral sclerosis, disseminated sclerosis, lead palsy, Landry's paralysis, uncomplicated cerebellar disease.

The Reflexes.

61. Exaggeration of the knee-jerk is common in many nervous affections, functional and organic, and possesses little diagnostic value.

62. Absence of the knee-jerk is an almost certain sign of grave disease, and should lead to enquiry for tabes dorsalis, general paralysis of the insane, peripheral neuritis, diabetes.

63. In diabetes the knee-jerk is sometimes lost without other evidence of peripheral neuritis.

64. Loss of the abdominal reflex is sometimes the first sign of disseminated sclerosis.—*Oppenheim.*

65. Loss of the Achilles tendon reflex is sometimes the first sign of tabes dorsalis.

66. An ill-defined and brief ankle clonus occurs in many conditions, and has little diagnostic value. A well-defined and sustained ankle clonus is strongly suggestive of organic lesion of the pyramidal tract, but is occasionally present in functional conditions.

67. Babinski's sign—dorsiflexion of the great toe on stroking the sole of the foot—is normal in children under two years of age, and up to ten or fifteen years of age it is sometimes present during sleep. It may be present in strychnine and hyoscine poisoning, after an epileptic fit, and in some states of unconsciousness. In most cases it is a sure, and may be an early, sign of involvement of the pyramidal tract. It may be difficult to elicit if the limb is cold, and it sometimes varies from time to time.

68. The Argyll-Robertson pupil is strong presumptive evidence of syphilis of the central nervous system, but a few cases are on record where syphilis could be excluded.

Tabes Dorsalis.

69. In tabes dorsalis the loss of the light reflex (reflex) and the retention of the accommodation reflex (voluntary) are parallel to the loss of the knee-jerk (reflex), and the retention of the voluntary contraction of the quadriceps.—*Thomas Buzzard.*

70. In tabes dorsalis the pupil sometimes dilates instead of contracting on accommodation, and the normal dilatation of the pupil on painful stimulation of the skin of the neck is often absent.

71. The fundamental signs of tabes dorsalis are four in number—lightning pains, loss of the knee-jerk, the Argyll-Robertson pupil, ataxia. The presence of three of these signs makes the diagnosis certain; the presence of two of them makes it probable.—*Hughlings Jackson.*

72. The order of development of the signs and symptoms in tabes dorsalis presents many variations, and no precise rules are possible.

The following signs and symptoms are usually early: Paræsthesiæ, lightning pains, loss of the

knee-jerk, the Argyll-Robertson pupil, transient diplopia, disturbance of bladder control.

The following signs and symptoms usually occur later: Ataxia, Romberg's sign, hypotonia of muscles, anæsthesia.

The following signs and symptoms are still later: Paralysis, incontinence of urine, cystitis, bedsores.

The following symptoms are not definitely related to stage: Optic atrophy, joint affections, perforating ulcer of foot, various crises, skin eruptions.

73. Tabetic ataxia has the following characters: The movements of the limbs are abnormally rapid and vigorous; there is exaggerated muscular action, both of the contracting and the opposing muscles; muscular contraction is unduly prolonged; the movements are more or less "staccato"; co-ordination is more impaired when the eyes are closed; the patient walks badly in the dark, has a difficulty in turning, after a rest may have trouble in getting under way again; he watches his feet; he brings his heels down with a stamp; the body is held stiffly, or there is the "cock stride," or the ataxic may walk much as the healthy man walks on slippery ground.

74. Romberg's sign is important corroboration of the presence of tabes dorsalis. A false

Romberg, due to auto-suggestion, is common in neurasthenics. It is easily detected by withdrawing the patient's attention from his equilibrium, and closing his eyes for the apparent purpose of testing ocular phenomena, when swaying ceases.

75. In tabes dorsalis, optic atrophy and ataxia are usually in inverse proportion.

76. The routine examination of the knee-jerks is as important as the routine examination of the heart.—*E. S. Reynolds.*

77. Tabes dorsalis is usually easy of diagnosis. In case of doubt enquire for general paralysis of the insane, cerebral syphilis, peripheral neuritis. The last is easily excluded.

78. The mental condition of tabetics is usually normal. Only a small proportion of cases develop general paralysis of the insane.

79. Charcot's joint disease is characterized by sudden effusion into one of the larger joints (knee, ankle, wrist, toe); painlessness; chronic course; gradual subsidence, or more often progressive atrophy and disintegration of the cartilages and bone ends.

Lateral Sclerosis.

80. In all cases where there are signs of sclerosis of the lateral columns of the cord, it is advisable to make enquiry for disseminated sclerosis.

Transverse Lesions of the Cord.

81. In complete transverse lesions of the cord there is atrophic paralysis, some degree of anæsthesia, and loss of the deep reflexes. In partial lesions there is spastic paralysis, increased knee-jerks, and in most cases ankle clonus and Babinski's sign.—*Bastian.*

Cerebral Hæmorrhage and Thrombosis.

82. The distinction of cerebral hæmorrhage from thrombosis of the cerebral arteries is sometimes difficult. In hæmorrhage premonitory symptoms are usually slight or absent. In thrombosis premonitory symptoms—paræsthesiæ, slight transient pareses, some embarrassment of speech—are the rule. Arterial tension is almost always raised in hæmorrhage; may be normal or low in thrombosis.

Cerebral Hæmorrhage.

83. In coma dependent on cerebral hæmorrhage, prognosis depends more on the duration than upon the depth of the coma.

84. A small hæmorrhage into the brain may cause slight symptoms which may be overlooked. A larger hæmorrhage often follows.

Brain Tumour.

85. In cases of suspected tumour of the brain it is important to exclude the following conditions: Bright's disease, lead poisoning, epilepsy, hypermetropia, some of the anæmias, general paralysis of the insane, cerebral abscess.

86. Headache is sometimes, but extremely rarely, absent in tumour of the brain. Vomiting is less constant. It is especially common in tumours of the cerebellum, the medulla, and the corpora quadrigemina.

87. The following are the most usual signs and symptoms in cerebellar tumour: Headache, vomiting, vertigo, optic neuritis, ataxia (not increased by closure of the eyes), disturbance of hearing, tremor, nystagmus, inequality of the deep reflexes.

In uncomplicated cases there are no objective sensory signs.

88. Many very obscure cases of cerebral disease are ultimately found to depend on the presence of tumour.

Aphasia.

89. The subject of aphasia is at present being reconsidered. The present tendency is to question the existence in the cerebral cortex of anatomically defined areas for the functions of

speech, but rather to postulate an extensive region associated with speech, and extending from the angular gyrus to the third left frontal convolution. The posterior portion of this area is conceived as mainly receptive, the anterior as mainly executive. There is thus an approach to conciliation between the views of Broca and those of Pierre Marie.

90. Healthy language consists of two inseparable yet distinct forms:

(*a*) Intellectual—the power to convey propositions.

(*b*) Emotional—the ability to exhibit states of feeling.

These two are separated by disease. The former suffers most, the latter often escapes altogether.—*Hughlings Jackson.*

91. Elements of speech of late ontogenetic or phylogenetic development are the first to be lost, and the last to be recovered in cases of aphasia.

92. The aphasic recovers a foreign language less easily than his own.

93. In medico-legal practice in cases of aphasia involving the question of testamentary capacity, the Court asks the medical witness two questions —viz., (*a*) Is there evidence that the testator knew his own mind as regards the disposal of his

property? (*b*) Is there evidence that his wishes have been correctly ascertained, whether by speech, signs, dumbshow, or by any other means? A large majority of aphasics possess testamentary capacity.

Lesions of the Optic Thalamus.

94. The following are the usual signs and symptoms in lesions of the optic thalamus: Persistent paroxysmal pains on the affected side; persistent hemianæsthesia, especially as regards deep sensation; slight transient hemiplegia without contractures; slight hemiataxy on voluntary movement; astereognosis; atheto-choreic movements on the affected side. Vision and hearing are sometimes involved.

General Paralysis of the Insane.

95. In the diagnosis of early general paralysis of the insane the patient's mentality is of fundamental importance. Some degree of intellectual failure or moral decadence occurs early. Enquiry should be made for tremor of the lips and tongue, abnormal state of the knee-jerks (exaggerated or lost), immobility or inequality of the pupils or the Argyll-Robertson phenomenon; peculiarities in speech or writing.

96. The general paralytic is often unhealthily fat in the middle stage of the disease; later, he wastes.

97. The tabetic form of general paralysis of the insane may lead to confusion with tabes dorsalis. The state of mentality is the best guide. Lightning pains are rare in general paralysis. The course of general paralysis is much more rapid than that of tabes dorsalis. In general paralysis the knee-jerks are more often exaggerated than lost.

98. Grandiose delusions are not pathognomonic of general paralysis of the insane. They are present in some cases of mania and in other mental affections. The general paralytic may be delirious, maniacal, depressed, or melancholic.

99. The treatment of tabes dorsalis is antisyphilitic (in certain cases), tonic, and hygienic. No drug has any decided effect upon old-standing cases. Rest and warmth are often useful. For the relief of the ataxia, Fränkel's exercises are sometimes of signal service.

Disseminated Sclerosis.

100. Disseminated sclerosis often causes difficulty in diagnosis. In the early stages hysteria is the chief source of error; in the later stages cerebellar disease may require to be considered. The signs of disseminated sclerosis present great variability, and the disease is one of the least uniform conditions known to medicine. In

a typical case the cardinal signs are the following: Intention (volitional) tremor, nystagmus, scanning speech (Charcot's *triade*); increase of the deep reflexes; partial optic atrophy. Any of these signs may be absent. Diplopia is often an early symptom. Some disturbance of bladder control is common. There may be loss of tone in the sphincter iridis. There are no objective sensory signs. The disease is usually progressive, but often shows remarkable remissions. Leyden thinks that some cases recover. The causation is obscure. Syphilis has no influence. It is usually a disease of early adult life. Statistics differ as to the sex ratio. No effective treatment is known, but in view of the tendency to remission general measures should be persevered with.

Chorea.

101. Slight and early cases of chorea are often overlooked.

102. If a child fidgets, cannot sit still, or drops book or slate, enquire for chorea.

103. In a doubtful case of spasmodic movements in a young child the absence of cardiac lesion makes chorea improbable.

104. If spasmodic movements are rhythmical the case is not one of chorea.

105. Chorea is commoner in the more emotional sex and at the more emotional age.—*Hughlings Jackson.*

106. Chorea mollis may be mistaken for paralysis, but the fine flickering movements of the passive limbs may give the required hint.

107. Arsenic has no specific influence upon chorea, but is sometimes useful as a blood-maker or nervine tonic.

108. In acute chorea sedatives are indicated, and the patient must be guarded against self injury. In the ordinary subacute type, arsenic, aspirin, or sulphate of zinc may be tried. In recurring cases, which are common, re-education of the muscles and psychotherapy are indicated.

Peripheral Neuritis.

109. Peripheral neuritis may arise in persons who are not obviously intemperate, but who have taken alcohol beyond their powers of assimilation, and who have neglected exercise.

110. The sensory condition in peripheral neuritis—viz., tactile anæsthesia and hyperalgesia—is distinctive, and goes far to establish the diagnosis.

Menière's Disease.

111. In cases of severe paroxysmal vertigo enquire for Menière's disease. Deafness usually

gives the clue. If deafness becomes complete the vertigo ceases.

Epilepsy.

112. In the examination of a case of epilepsy enquire into the following points:

(*a*) Family history—the family tree may contain cases of epilepsy, insanity, alcoholism, migraine, chorea, hysteria.

(*b*) Personal history—there may be a history of birth accidents, difficult dentition, rickets, injury to head or spine, infectious fevers.

(*c*) Nature of the attack: It may take the form of *grand mal*, *petit mal*, Jacksonian epilepsy, psychic epilepsy.

(*d*) Physical condition of the patient: Physiognomy; presence of bromide acne; stigmata of degeneration (*e.g.*, asymmetry of the skull, abnormal palate, misshapen ears, hairiness); scars on tongue, lips, or limbs; state of eyes, ears, mouth, teeth; sensory and reflex conditions.

(*e*) The patient's mentality.

113. A first attack of epilepsy is rare after the age of thirty. After this age an epileptic seizure,

arising for the first time, should lead to enquiry for organic disease—nervous or circulatory.

114. Epileptic seizures preserve a constancy of type in the same individual.

115. The epileptic in a fit closes the fingers over the thumbs; the malingerer closes the thumbs over the fingers.

116. The epileptic in a fit keeps the eyes open and rolls them about; the hysteric keeps the eyes tightly closed and resists any attempt to open them.

117. Somnambulism is usually a post-epileptic phenomenon.—*Hughlings Jackson.*

118. Epileptic mania is the most furious of all varieties of mania.—*Hughlings Jackson.*

119. Chorea and epilepsy may disappear with the onset of an acute fever, especially scarlet fever.—*Hughlings Jackson.*

120. Sudden death in an epileptic fit is very rare. It may be due to cerebral hæmorrhage; obstruction of the respiratory tract by articles of food; rupture of the aorta, heart, or diaphragm.

121. Sudden lapses in speech and in behaviour suggest *petit mal.*

122. *Petit mal* may be confused with syncope. The former occurs without exciting cause; the onset is very sudden; the attacks are sometimes nocturnal; the attacks are very brief; cardiac action is little affected; recovery is rapid; recurrence is usual; the patient is well in the intervals between the attacks. In all these particulars there is a contrast with syncope.

123. Epilepsy, like aphasia, has been studied from a psychological habit of mind, and, as I think, this way of studying such a disease is unfruitful.—*Hughlings Jackson.*

124. The prognosis of epilepsy is slightly more favourable if the patient is of the female sex, and distinctly more favourable if the disease begins over twenty than if it commences between ten and twenty. It is better the shorter the duration of the disease, and when the disease is inherited than when no heredity can be traced. It is better the longer the interval between the severe attacks, and is least so when the attacks occur daily. It is better if the attacks occur in the sleeping or the waking state only than if they occur in both. It is better if there is no considerable mental change, and if the attacks are all of the severe variety, than if there are minor seizures, and better if the attacks are preceded by

an aura than if they occur without warning.—*Gowers.*

125. Bromides are the sheet-anchor in the treatment of epilepsy. Belladonna is the most useful adjuvant. Borax is worthy of a trial, if bromides fail. It is most useful in *petit mal.* The triple bromides are advisable. The dose must be regulated according to the nature of the case and the patient's age. About 30 grains t.i.d. is an average quantity for an adult. Mendel recommends one full dose at bedtime given in valerian tea. Arsenic may be added to the bromide mixture to obviate bromide acne. Pierre Marie recommends tartrate-borico-potassique in doses of 3 grams daily. One dose of bromides should be given daily for two years after the last epileptic seizure. When there is a definite aura, an inhalation of nitrite of amyl will sometimes avert the attack.

This treatment results in cure in about 10 per cent. of cases, and mitigation of the disease in 80 or 90 per cent. of the remainder.

126. The pathology of epilepsy is unknown. As it may be in some sense a toxæmia, it is advisable to regulate the diet and secure elimination. The diet should consist mainly of milk, eggs, butter, farinaceous articles, vegetables, and fruits,

with a minimum of meat. A purely vegetarian diet is not usually advisable, but is sometimes worthy of trial. Alcohol should be forbidden.

127. Post-epileptic mania and automatism may involve difficult medico-legal problems. In the solution of these problems the medical witness must avoid a partisan attitude, and regard himself as an expert called in to assist the court. Epilepsy is sometimes put forward fraudulently as an excuse for crime.

Functional Nervous Diseases.

128. Never diagnose functional disease of the nervous system until organic disease has been enquired for and excluded.

129. The wider our experience the more we are impressed by the extraordinary mimicry of organic nervous disease which may occur in functional disorders. The list of signs and symptoms pathognomonic of organic nervous disease tends to grow shorter. The following may be provisionally suggested: Lightning pains, girdle pain, dissociated anæsthesia, loss of the knee-jerk, Babinski's sign (in adults), true ataxia, Romberg's sign, the reaction of degeneration. Nystagmus, intention tremor, optic atrophy, ankle clonus, are rare, except in organic nervous disease, but are not to be implicitly relied upon.

130. Do not forget that functional and organic nervous disease often coexist, and that the former may overshadow the latter.

131. It is important from the medico-legal point of view to recognise that accident, shock, nervous stress, may evoke signs and symptoms of organic nerve lesion which had previously escaped detection.

132. The fact that a litigant improves in health after gaining a favourable verdict in the courts does not necessarily prove that his claim was fraudulent.

Hysteria.

133. Theories regarding the nature of hysteria are many and discrepant. The subject is not likely to be fully understood until more light is thrown upon the relation of mind and body. The following are some of the chief views held by various authorities:

(*a*) That hysteria is simply suggestibility.—*Babinski; Gilles de la Tourette.*

(*b*) That hysteria is due to suggestibility and dissociation of personality.—*Charcot.*

(*c*) That hysteria is due to retraction of the field of consciousness and an alternation of mental states.—*Pierre Janet.*

(*d*) That hysteria depends on the "psychic conversion of sexual trauma."—*Freud.*

(*e*) That hysteria is the persistence in the adult of the childish type of reaction to the facts of life.—*Schnyder.*

(*f*) That hysteria is a case of "moral ataxia."—*Huchard.*

(*g*) That hysteria depends on vaso-motor irritability.—*Savill.*

(*h*) That hysteria is a "conversion neurosis."—*Rivers.*

134. Only the hysteric is hypnotisable. Hypnosis is an artificially produced hysteria.—*Pierre Janet.*

135. Many hysterical symptoms are minus symptoms.—*Déjerine.*

136. The patient says she cannot. Her friends say she will not. The doctor says she cannot will.—*Paget.*

137. *Entre l'hystérie et la fraude il n'y a qu'une différence d'ordre moral.—Babinski.*

138. The hysterical fit has the following characters: It is often, but not always, provoked by emotion; consciousness is never lost; the patient never hurts herself; there is no lividity of the face or stertorous breathing; there are no involuntary evacuations; the patient does not

bite her tongue; the eyes are kept tightly closed and the patient resists any attempt to open them; the fit may last from fifteen or twenty minutes to several hours, and may end in an emotional explosion; the fit is never followed by coma, and only rarely by vomiting; the face often shows a variety of changeful expressions; the pupillary and conjunctival reflexes are retained; recurrence of fits is usual.

139. The hysteric can sometimes be cured by seasonable neglect. The neurasthenic can sometimes be cured by teaching him to neglect himself. —*Tanzi.*

140. For the hysteric the bedchamber is unwholesome; the disease engendered by isolation is fostered by the seclusion; in social suggestion lies the cure.—*Clifford Allbutt.*

141. *C'est la foi qui sauve et qui guérit.—Charcot.*

142. You cannot cure a case of hysteria so long as you have any serious doubts about its nature.—*Thomas Buzzard.*

143. The cure of the hysteric depends more on the personality of her physician than on his methods.

Neurasthenia.

144. In the differential diagnosis of hysteria and neurasthenia the most important points are

the following: Age, sex, history, causation, mental condition, state of the special senses, and of speech.

145. The following stigmata of hysteria are not found in neurasthenia: Hysterogenic zones, patches of anæsthesia, spasm, convulsion, contractures, paralysis, defects of vision, abnormalities of speech, moral perversion.

146. The neurasthenic never shows distinct intellectual failure or moral decadence. Many men of genius have been neurasthenic—*e.g.*, Pascal, Rousseau, Leopardi, Comte, Flaubert, Nietzsche, Herbert Spencer.

147. The neurasthenic suffers chiefly from a sense of tire; incapacity for sustained exertion, mental or physical; a tendency to morbid introspection and mental depression. Headache is usual, and sleep is unrefreshing. Digestion is often, but not always, impaired.

148. Headache is a prominent symptom in neurasthenia. It is most often a sense of dull weight and oppression referred to the vertex or the occiput. It is worse in the mornings. It is relieved by food, exercise, and cheerful society.

149. The neurasthenic wakes tired because his sleep is unrefreshing. He is often disturbed by dreams which he sometimes forgets.—*Mott.*

150. In melancholia the depression is continuous: in neurasthenia it is discontinuous. In melancholia the desire to act is lost; in neurasthenia it may be strong, but the power to act is weak.

151. The vice of the neurasthenic is introspection. When he ceases to think of himself he is on the high-road to recovery.

152. The treatment of neurasthenia must be psychical, otherwise the relief of physical symptoms will be only temporary.—*William Brown.*

153. The essential thing for the neurasthenic is, first of all, not to struggle, but rather to make himself forget.—*Déjerine.*

154. Tell the neurasthenic that he has overdrawn his balance at the bank of life, and that he must learn to equalise income and expenditure.

155. Neurasthenia rarely arises without some definite cause, and the cause is usually one that involves some form of psychical stress.

156. It is a very serious error in the treatment of nervous affections to carry exercise to the fatigue point.—*Gull.*

Psychotherapy.

157. Psychotherapy is a convenient name applicable to all forms of treatment which depend on

education, persuasion, or suggestion, and not on physical or chemical influences, for their success.—*E. Farquhar Buzzard.*

158. When worry and anxiety are out of all proportion to the alleged cause, the real cause is usually subconscious.

159. There is nothing so fatiguing as emotion, continual anxiety, and worry.—*William Brown.*

160. Psychoses and neuroses are the result of conflict. Imperfect reaction to circumstances and environment is the fundamental fact. Neurosis is partial failure of adaptation; psychosis is complete failure.

161. In the compulsion neuroses the patient is usually obsessed by the wrong thing.—*Freud.*

162. He who sets out to cure a neuropath and does not help him very much, is sure to make him worse.—*T. A. Ross.*

163. There would be less " psycho-pathology " of everyday life if we kept up our acquaintance with the bonnie briar bush, and the cry of the whaup on the moorland.—*J. Arthur Thomson.*

164. In the treatment of the psycho-neuroses the most important points are the following: To arouse the expectation of cure, suggestion in some form, graduated employment, re-education.

165. In many cases of the psycho-neuroses prolonged rest in bed, electrical treatment, massage, and hydrotherapy only serve to deepen the patient's obsession of serious disease. Occupation helps to deepen the expectation of cure.

Psycho-Analysis.

166. The value and place of psycho-analysis are still *sub judice*. Its occasional successes cannot be denied, but it is a troublesome method, and easily open to abuse. Freud has exaggerated the sexual element in the psycho-neuroses. His theory of the relation of the unconscious to disease is still under discussion. Freud's doctrine that dreams are a disguised fulfilment of repressed desires is only a partial truth.

166A. Dreams are often rather an attempt at a solution of a conflict than the fulfilment of a wish.—*Rivers.*

167. Jung regards failure of adaptation and regression to a more primitive form of adaptation as the essential features of the psycho-neuroses.

168. There are persons who demand from their nerves more than hygienic life would allow, because they are too little provided with that healthy feeling of fatigue which nature has arranged as a warning sign for the exhaustion of the nervous system. But incomparably larger is

the number of those who have trained themselves to feel fatigued long before any exhaustion is threatening. It is weakness of will and attention which causes the deceitful impression of nervous exhaustion, which is really nothing but a poor habit. Imitation plays a big rôle in it; continuous indulgence a greater. The longing for rest and for interruption of regular work can become just as much a craving and vicious custom as the longing for stimulants.—*H. Münsterberg.*

169. Many methods in vogue in the treatment of the psycho-neuroses are useful only as means of suggestion.

Occupation Neuroses.

170. The occupation neuroses are the result of fatigue—rest is the only cure.

Myelitis.

171. Brown-Séquard advised the use of belladonna and strychnine in myelitis, the former in acute, the latter in chronic cases. The use of strychnine, however, in presence of spasticity is doubtful practice.

Migraine.

172. In the treatment of migraine constitutional measures hold the first place. Rest, warmth, and tonic measures are often useful. Travel is some-

times beneficial. Bromides, iron, and nitro-glycerine are useful in certain cases. Gowers recommends the combination of sodium bromide, gelsemium, strychnine, and trinitrin. Time is in the patient's favour. Errors of refraction should be corrected.

Sciatica.

173. The secret of success in the treatment of sciatica is time and patience. Most cases get well with rest, warmth, and suitable anodynes. Internal medication should be adapted to the constitutional state. Balneological treatment is sometimes of service. Electricity is worthy of a trial. In obstinate cases the application of the long splint has sometimes surprising results. Massage is not to be advised. Counter-irritation is valuable. Routine depletion is a mistake, as many of these patients are neurotic, and need tonic and supporting measures.

Insomnia.

174. Apart from organic or functional disease, the cause of insomnia is usually psychical. It tends to become a bad habit. Sleep is automatic, and the aim should be to restore the normal rhythm. Suggestion in some form is useful. Hypnotics should be used very sparingly. Too much exercise sometimes does harm. Mental

hygiene should be cultivated. Warm food at bedtime sometimes helps. The various devices often advised to induce sleep are apt to do harm by fixing the patient's attention upon his condition. If he lies still and banishes disturbing thoughts, nature will usually assert herself. Auto-suggestion may be of service. The sufferer from insomnia should rise early, and not spend more than eight hours in bed.

175. Where alcoholism, worry, anxiety, sleeplessness, or other possible causes of nervous disease have preceded obvious nervous breakdown, it is well to enquire whether they are the efficient causes or only the earliest symptoms of nervous instability.

176. A tendency to sleep badly runs in families, and is sometimes observed in the youngest infants.—*S. Gee.*

The Nervous System of the Child.

177. Owing to the imperfect development of the higher nerve centres young children find fine associated movements difficult or impossible. Fine finger work should not be attempted in children under six years of age.—*S. Gee.*

178. In the training of young children the teacher should study the limits of fatigue. Twenty minutes may be a sufficiently long lesson.

School Hygiene.

179. Overpressure in schools is commoner in girls than in boys. It seldom arises simply from hard mental work, but rather from work involving anxiety and stress—*e.g.*, preparation for examination where financial rewards are in question, or from work carried on under bad hygienic conditions, or from improper food or neglect of sleep.

180. It is a radical mistake to combine or alternate hard mental work and severe physical exertion. A tired body does not help the brain to function, and *vice versâ*. The brain is not alone the organ of thought; it is also the storehouse of muscular energy.

181. It has been proved by experiment that the best periods for subjects involving severe mental application, such as Greek and mathematics, are the second and third in the school time-table, and the worst are the two final periods.

182. Subjects involving severe mental application should be alternated with lighter subjects, such as demonstration lessons, art studies, calisthenics, drill.

183. Very young children learn better by the eye than by the ear.

VI.—MISCELLANEOUS

Pyrexia.

1. Continued pyrexia, without physical signs, lasting more than one week probably points to either typhoid fever, pus, or tubercle; lasting more than one month, without physical signs, it probably points to pus or tubercle; lasting more than two months, without physical signs, it probably points to tubercle.—*W. Jenner.*

2. It is doubtful how far pyrexia in pyrexial disease is a direct result of some irritative process or part of nature's defensive mechanisms to combat a toxin. Hence, routine antipyresis is wrong, but in this, as in many other cases, nature's protective efforts may overshoot the mark and demand restraint.

Conditions often Overlooked in Practice.

3. The following conditions are often overlooked in practice: Early chronic nephritis, early disseminated sclerosis, early exophthalmic goitre, early myxœdema, slight cases of chorea, commencing diabetes, thoracic aneurysm, small pericardial effusions, parasites, concealed alcoholism.

4. Nothing is more ominous in acute disease than a falling temperature and a rising pulse.

5. In obese persons the death-rate is high in diabetes, apoplexy, heart disease, pneumonia, and Bright's disease.—*W. Hale White.*

6. In endeavouring to forecast the course of acute disease consider the questions:

(*a*) How is the patient bearing the attack from the side of his cardio-vascular system ?

(*b*) How is he bearing the attack from the side of his nervous system ?

7. In elderly patients many diseases are more or less latent.

8. In cases of obscure illness, especially at or after middle life, test the functional activity of the kidneys.

9. In presence of abnormal symptoms, enquire if the patient is taking drugs.

10. If the patient complains of sores that will not heal, enquire for tabes dorsalis and diabetes.

11. Some cases of lingering pyrexia will not get well so long as the patient remains in bed.

12. In cases of unexplained wasting enquire for phthisis, cancer, diabetes, and exophthalmic goitre.

13. Always examine the throat of a sick child.

14. Backache is usually muscular; rarely renal; sometimes gastric, colonic, uterine, ovarian.

15. The most common causes of pain in children are: External irritants, dentition, intestinal colic, dyspepsia of various forms.

16. Nearly all disease depends not so much upon the presence of a *plus* as upon the absence of a *minus*. Were it not for the poverty of the soil in defensive essences the seeds of disease would never grow.—*Leonard Williams.*

17. A slight ailment often promotes longevity. —*Oliver Wendell Holmes.*

18. In cases of sudden intense dyspnœa arising in a child previously in good health, enquire for foreign body in the air passages.

19. Extreme cyanosis in a young child suggests congenital disease of the heart or broncho-pneumonia; in the adult, mitral disease; in the elderly, emphysema.

20. In examining for cyanosis do not neglect to examine the ears.

21. The "heliotrope" tinge of complexion in acute disease (*e.g.*, malignant influenza) usually portends death.

22. Mitral disease causes lividity by interfering with the circulation of the blood, bronchitis by

interfering with its aeration, and emphysema in both ways.—*S. Gee.*

23. Cheyne-Stokes respiration indicates grave danger, but not necessarily impending death. It occurs in cerebral disease, uræmia, arterio-sclerosis, some forms of cardiac disease, some cases of poisoning.

24. Clubbing of the fingers is common in advanced mitral disease, congenital disease of the heart, bronchiectasis, empyema.

25. Night sweats in children have other causes than tuberculosis.

26. Vomiting with a sharp rise of temperature should lead to enquiry for pneumonia, scarlet fever, appendicitis. It is also common in pleurisy in children.

27. Beware of sudden change in any great point of diet, and if necessity enforce it, fit the rest to it.—*Francis Bacon.*

28. Malnutrition may result from excess of unsuitable foods as well as from defect of suitable foods—*e.g.*, excess of carbohydrates, leading to defective oxidation and the formation of acid bodies with a larger demand for calcium salts than the claims of the growing organism can support, is one of the principal causes of rickets.—*Eric Pritchard.*

Alcohol.

29. Alcohol is not a routine remedy in any disease.

30. There is a wide difference of opinion regarding the value of alcohol in the treatment of disease. Its use is much more restricted than formerly. Its effects vary much in health, and it is probable that they also vary much in disease.

31. While it is often difficult to decide upon the administration of alcohol, it is comparatively easy to determine whether, when administered, it is doing good or otherwise. If it is acting beneficially, the pulse will become steadier, the skin will act more freely, the urine will become more abundant, the nervous system will become calmer, sleep will improve.

32. There is experimental evidence to prove that while, under normal conditions, alcohol diminishes the accuracy of mental processes, it hastens the return of normal mental activity under conditions of fatigue.

33. Never have alcohol in the brain when the brain has work to do.—*Fothergill.*

34. When the question of the administration of alcohol in disease arises, it is important to bear in mind the patient's previous habits as regards its use.

35. Alcohol is, as a rule, unnecessary in the acute infectious diseases; children, especially, are often better without it, but in some conditions it is indispensable.—*Claude B. Ker.*

36. The value of alcohol in pneumonia has been greatly overrated. Many cases do better without it, but in presence of weak cardiac action, extreme exhaustion, or maniacal excitement, it is worthy of trial.

37. Alcohol is poison to diseased kidneys.

38. The epileptic should abstain from alcohol.

39. Alcohol has a limited value as a food in certain cases where the patient is unable to retain or assimilate other forms of nourishment.

40. Alcohol has considerable value in the debility attending convalescence from acute disease.

41. If alcohol promotes appetite and improves digestive capacity, it is doing good, and *vice versâ.*

42. A history of alcoholism involves death-rates of 174 per cent. above the average.—*W. Hale White.*

43. The consumption of alcohol in many hospitals is only about one-third or one-fourth of the amount consumed thirty or forty years ago.

44. Inebriety is a form of neurosis. It arises seldom in persons of sound stock and average mentality.

45. Remember that concealed alcoholism is common, and that the alcoholic is usually untruthful.

46. In enquiring for concealed alcoholism attach importance to the following points: Undue frequency of the pulse, not otherwise accounted for; tremor of the tongue; dyspeptic symptoms, usually worse in the mornings.

47. Cures for inebriety act mainly by suggestion. The most hopeful line of treatment is that suitable for a special form of neurosis. Eliminative measures are valuable at the commencement of treatment.

48. Under the influence of alcoholic excess the functions of the brain are stripped off in the inverse order of their development—viz.:

(1) Moral control and responsibility.
(2) Deliberation and judgment.
(3) Attention and concentration.
(4) Memory and receptivity.

Hughlings Jackson.

Nephritis.

49. In acute nephritis the indications for treatment are clear and the treatment is usually successful. Secure rest, quiet, and warmth. Spare the kidneys and give a minimum of nourish-

ment. Act freely upon the bowels and the skin. Do not give any excess of diluents. Avoid the use of stimulating diuretics, but citrate of potash, spiritus ætheris nitrosi, and liquor ammoniæ acetatis may be employed. The hot pack or the hot-air bath should be employed. Do not pursue eliminatory measures to the point of seriously depressing the heart. Be on the watch for signs of threatened uræmia.

The French School objects to the exclusive use of milk on the ground of its richness in salts, and advises a diet of bread, vegetables, etc.

50. The following is Senator's classification of the varieties of nephritis:

(1) Acute Nephritis.
    (*a*) Parenchymatous — Tubular, Glomerulo-Nephritis.
    (*b*) Diffuse.
(2) Chronic Diffuse Nephritis without induration.
(3) Chronic Indurative Nephritis.
    (*a*) Primary.
    (*b*) Secondary.
    (*c*) Arterio-Sclerotic.

This is a good classification, but the existence of an independent type of arterio-sclerotic chronic indurative nephritis is still in question.

51. The French School divides cases of chronic nephritis into four groups:

(1) A simple albuminous form.
(2) A hydropigenous or dropsical form.
(3) A hypertensive form, characterised by high blood pressure.
(4) An azotæmic or nitrogenous form, characterised by an increased amount of urea in the blood stream.

These forms may to some extent overlap.

52. In the hydropigenous or dropsical form œdema is present, albumin is often abundant, chlorides are diminished, urea concentration is normal, the diastase reaction is little affected, there is little tendency to arterio-sclerosis, the heart is normal, hæmaturia is rare. In the azotæmic or nitrogenous form œdema is slight or absent, albumin is scanty, chlorides are normal in amount, urea concentration is diminished, the diastase reaction is low, the heart is usually enlarged, there is a marked tendency to arterio-sclerosis, hæmaturia is common.

53. Large white kidney, large white patient.

54. It is doubtful whether any certain distinction can be drawn between small red kidney and small white kidney.

55. An increase in the nocturnal secretion of urine is one of the earliest and most trustworthy signs of chronic nephritis. The normal amount is about 400 c.c.

56. Few diseases are more often overlooked than chronic nephritis in an early stage. Constitutional symptoms may be obscure. Œdema may be slight or absent. The only security lies in frequent examination of the urine. Albumin may be temporarily absent. Increased pulse tension often gives a hint.

Renal Efficiency.

57. There are many tests of renal efficiency, and their relative value is still a matter of controversy. The most trustworthy tests would appear to be:

(*a*) The estimation of the blood urea.
(*b*) The urea concentration test.
(*c*) The chloride excretion test in parenchymatous nephritis.

There is a difference of opinion regarding the value of the various colour tests, and the diastase test. It should be remembered that in regard to all these tests the results of one examination are open to fallacy. Repeated examinations are in most cases indispensable. All tests should

be interpreted in the light of the clinical condition.

58. According to Widal the prognosis in chronic azotæmic nephritis may be gauged by the amount of urea in the blood stream as follows:

(*a*) ½ to 1 gram per litre of blood—prognosis guarded, but fairly favourable.

(*b*) 1 to 2 grams per litre of blood—life not prolonged beyond two years.

(*c*) Over 2 grams per litre of blood—life expectation under two years.

(*d*) 5 grams or over per litre of blood—death imminent.

59. The amount of albumin in the urine is no safe guide to the state of renal efficiency.

60. Young patients with granular kidney do not long survive. Older patients do better, and under careful management may have many years of comparative health. They usually die ultimately of cerebral hæmorrhage, uræmia, or pneumonia.

61. Early retinal changes in chronic nephritis warrant a grave prognosis. They suggest general arterial degeneration.

62. The onset of uræmia is usually foreshadowed by an increase of headache and gastric disturb-

ance, muscular twitchings, ocular phenomena, and a diminution in the excretion of urine.

63. In the treatment of chronic Bright's disease the main indication is to preserve a just balance between eliminatory measures on the one hand and tonic and nutrient measures on the other hand. It is equally erroneous to spare the kidneys at the expense of the general health, and to foster the general health at the expense of the kidneys. The aim should be to find the proper *via media.*

64. Epstein's diet is sometimes of signal service in chronic parenchymatous nephritis, but it is not always well borne.

65. In the treatment of renal disease think of the heart almost as much as of the kidneys.

66. Morphia was formerly regarded as dangerous in uræmic convulsions. Its use is now approved.

Functional Albuminuria.

67. In functional (orthostatic, cyclical) albuminuria the patient is usually young and of the male sex; some cause (especially physical or mental stress, immersion in cold water, dietetic error) can usually be discovered; the amount of albumin is small; the albuminuria is usually

intermittent; it is often absent in the morning; the urine is otherwise normal; there are no cardio-vascular changes; there is no tendency to uræmia.

68. Some observers find lordosis common in cases of functional albuminuria.

69. Do not diagnose functional albuminuria in a patient over thirty years of age.

70. In cases of hæmaturia enquire first for calculus and uric acid gravel; next for granular kidney; next for new growth in the kidney or the bladder.

71. Profuse hæmaturia with little pain occurring in a patient at or after middle life should suggest a new growth, if granular kidney can be excluded.

72. The best remedy for uric acid gravel is whey.—*S. Gee.*

73. Scarlet fever often leaves permanent renal disease behind; diphtheria seldom. If the patient recovers from diphtheria he recovers with sound kidneys.

74. In the treatment of renal dropsy common salt should be excluded from the dietary.

75. It is doubtful if there is a true syphilitic nephritis.—*Clifford Allbutt.*

Rheumatism.

76. The word "rheumatism" has no definite connotation. It is a remnant of the old humoral pathology. It conceals three or more pathological conditions.

77. Rheumatism is often overlooked in the child, in whom it partakes more of a general and less of a local affection than in the adult. Pericarditis, anæmia, throat affections, and skin affections are relatively common in the rheumatic child.

78. If a child is feverish, anæmic, and complains of pains, enquire for rheumatism.

79. Chronic rheumatism is not usually a sequel of the acute disease.

80. When a patient complains of "rheumatism" do not forget to enquire for peripheral neuritis.

81. Rheumatoid arthritis may have an acute or a subacute onset, and its differentiation from acute and subacute rheumatism is sometimes difficult. The most helpful points are the following: The tendency of the former disease first to involve the smaller joints (hands and feet); to spare the heart; to occur later in life, and to be related to such causes as worry, grief, privation, poverty, debility, the menopause, excessive lac-

tation. At a later stage, the evidence of involvement of the cartilages and bone ends is usually decisive.

82. The proposal to differentiate rheumatoid arthritis from osteo-arthritis has been made, but its success is doubtful. It is suggested that the former occurs in youth and middle age, mainly in females, is often the result of privation and underfeeding, is often febrile, polyarticular, involves the small joints, maxillary joint often affected, no osteophytes present, reaction of degeneration sometimes found. Osteo-arthritis, on the other hand, is said to occur chiefly in the elderly, more often in the male sex, onset slow, mono- or oligo-articular, large joints affected, maxillary joint not involved, non-febrile, osteophytes present, general health fair. It is probable that the "osteo-arthritis" type is often a late stage of the "rheumatoid" type.

83. The salicylates are of slender value except in acute and subacute rheumatism. Their employment in rheumatoid arthritis, muscular rheumatism, and sciatica is of doubtful advantage.

84. In the treatment of acute rheumatism continue the use of the salicylates, in diminishing doses, for three weeks after the subsidence of the pyrexia and acute joint symptoms; otherwise

relapse is probable. The further treatment is mainly tonic.

85. In the treatment of patients convalescing from rheumatism there is no advantage in a meagre dietary or a strict limitation of proteids. Digestive capacity is the best guide to diet. It is probably advisable to restrict sweets and red meats.

Chronic Arthritis.

86. The treatment of chronic arthritis, viewed generally, should contemplate the following points, viz.:

(*a*) The discovery, if present, and the removal of any source of focal infection in tonsils, frontal sinuses, teeth, gums, bladder, urinary organs, appendix, genital organs.

(*b*) Rest, fresh air, generous diet, much fluid.

(*c*) Massage, electricity, hydrotherapy, physical exercises, callisthenics.

(*d*) Laxatives, tonics.

(*e*) Autogenous vaccines are advised by many observers.

(*f*) Cheerful surroundings and moral support.

Rickets.

87. It is disputed whether rickets is due to dietetic causes—viz., excess of carbohydrates, and

lack of vitamins in the food; or to bad hygienic conditions. Lack of sunlight has much influence. The disease is much commoner in winter. Most cases yield to a suitable dietary, cod-liver oil, fresh air, and sunshine. The ultra-violet rays have much influence upon nutrition.

88. Infantile scurvy and rickets may be difficult of differentiation. Beading of the ribs may be present in both affections. The tendency to hæmorrhages and the condition of the gums in the former affection have much diagnostic weight.

Anæmia.

89. In all cases of anæmia exclude hæmorrhage before proceeding further.

90. Hæmorrhage from the bowel is often overlooked by the patient. It may be present in the form of "occult blood."

91. In chlorosis sex gives the disease its distinctive characteristics.—*Van Noorden.*

92. Chlorosis requires to be differentiated from phthisis, pernicious anæmia, parasites, and pregnancy.

93. Iron is a specific in chlorosis. The form of the remedy is immaterial, provided it does not disorder the patient's digestion. Full doses are desirable. Aperients are required.

94. An anæmia which does not yield to iron is not chlorosis, provided sufficient rest and suitable diet are secured.

95. The failure to cure chlorosis is generally due to the neglect to enforce adequate rest.

96. The physician who cannot cure chlorosis should retire from the practice of his profession.—*W. Osler.*

97. Iron is not of signal service in any form of anæmia except chlorosis.

Pernicious Anæmia.

98. Pernicious anæmia has to be distinguished from the following conditions: Malignant disease, severe hæmorrhage, pregnancy, ulcerative endocarditis, severe chlorosis, Bright's disease, chronic syphilis, parasites (bothriocephalus, ankylostoma, etc.).

99. Malignant disease (especially of the stomach) is the most frequent source of error in the diagnosis of pernicious anæmia.

100. The distinction of pernicious anæmia from severe forms of secondary anæmia is sometimes difficult, and may even be impossible. The blood-picture will not in every case establish the diagnosis.

101. The more acute the case of pernicious anæmia the higher the colour index.

102. Do not forget the achylia and the involvement of the postero-lateral columns of the cord in pernicious anæmia.

103. A good rally is usual under treatment in a first attack of pernicious anæmia. Relapse is the rule, and may occur at any interval from a few months to several years. A second attack is much less amenable to treatment than a first attack, but may be followed by a second rally. The average expectation of life is two to three years.

104. In the treatment of pernicious anæmia there are five points, and only five, of fundamental importance—viz., prolonged rest, fresh air, abundance of easily digested food, the prevention of oral sepsis, and arsenic pushed to the limit of toleration. Transfusion of blood is only of temporary benefit.

105. Remember that in pernicious anæmia the HCl of the gastric contents is diminished or absent; proteids, therefore, are better omitted in beginning treatment.—*G. L. Gulland.*

The Leukæmias.

106. The leukæmias are readily diagnosed by a blood examination. They are rebellious to treatment. Arsenic is sometimes useful. Benzol is better avoided. X-rays and radium have had some success.

Splenic Anæmia.

107. Splenectomy has had some good results in the treatment of splenic anæmia.

108. The spleen is more sinned against than sinning.—*F. Taylor.*

Influenza.

109. A pyrexia which shows no abatement by the sixth or the seventh day is not influenzal, unless complications are present.

110. The psychical condition—irritable depression—has considerable weight in the diagnosis of influenza. The treatment is mainly tonic.

Typhoid Fever.

111. In typhoid fever the patient is usually apathetic ; in influenza he is irritable and depressed.

112. In early typhoid fever pain is present chiefly as frontal headache; in early influenza pains in the back and limbs are the rule.

113. In a case of doubtful pyrexia a mild bronchitis favours, vomiting and profuse sweating are against, the probability of typhoid fever.

114. Typhoid fever may be confused with pulmonary tuberculosis, but the former has a more

definite onset, a more rapid rise and a higher range of temperature ; frontal headache is usually marked, but abates in the second week; profuse sweating is rare; abdominal signs tend to develop; the spleen is usually enlarged. The specific rash or a positive Widal reaction settles the diagnosis.

115. A strict milk diet for several weeks in typhoid fever is the rule in British practice, but veal tea is extensively employed on the Continent, and some authorities advise the addition of yolk of egg, meat juice, butter, biscuits, fruit juices, etc.

116. Hydropathy is of great value in typhoid fever, especially in presence of severe pyrexia.

117. When perforation occurs in typhoid fever prompt operation is the only resource. Time is of vital importance. Every hour's delay lessens the patient's chance of recovery.

118. The " typhoid state " is sometimes due to lack of sufficient nourishment.

Measles.

119. A sudden intense catarrh and a sharp rise of temperature in a child should lead to enquiry for measles.

120. *Lachrymæ—certissima signa morbillorum. —Sydenham.*

Scarlet Fever.

121. At the outset of scarlet fever vomiting and excessive frequency of the pulse possess considerable diagnostic value.

German Measles.

122. When a measly or scarlatiniform rash suddenly appears, with little pyrexia or general constitutional disturbance, the case is probably one of German measles.

Diphtheria.

123. In diphtheria the patient usually opens the mouth easily; in quinsy he opens it with difficulty or not at all.

124. In a doubtful case of diphtheria the rule of practice should be to administer antitoxin without waiting for confirmation of the diagnosis. Every hour lost diminishes the patient's prospects of recovery.

125. There is evidence to show that the doses of antitoxin usually given in diphtheria are too small. The young child requires as large a dose as the adult.

126. In diphtheria, even in mild cases, the patient should be kept recumbent for three weeks.

127. Local treatment of the throat in diphtheria is, as a general rule, inadvisable. If, however, there is much septic discharge normal saline may be used as spray or irrigation.

128. In cases of diphtheritic paralysis, if the patient survives the paralysis disappears.

129. The Schick reaction has proved of great value in determining the presence of immunity. The majority of persons are naturally immune. Susceptibility is greatest in the second year of life.

Enlarged Cervical Glands.

130. A large proportion of cases of enlarged glands in the neck are non-tuberculous, and can be cured by attention to the hygiene of the throat, nasal drill, and general hygienic methods. Sea air is often useful. In some cases enucleation of the tonsils or removal of adenoids may be advisable.

Addison's Disease.

131. Various forms of pigmentation may simulate Addison's disease, but in none of them are found the profound muscular and cardio-vascular asthenia, the very low systolic blood pressure (sometimes as low as 60 or 70 mm.), and the marked gastro-intestinal disturbance so characteristic of Addison's disease. The value of suprarenal extract is doubtful.

Nocturnal Incontinence of Urine.

132. In the treatment of the nocturnal incontinence of urine in children the most important points are the following: Warm clothing and warmth at night; an unstimulating diet; no fluid for two hours before bedtime; the removal of any source of peripheral irritation; belladonna, bromides, urotropin; citrate of potash if *B. coli* be found in the urine, general constitutional treatment. Thyroid extract may be tried.

Exophthalmic Goitre.

133. Early exophthalmic goitre is sometimes overlooked. Tachycardia and general nervousness are the most constant initial symptoms. The thyroid is not always enlarged.

134. In exophthalmic goitre tissue metabolism is high and the patient wastes.

135. About 10 to 12 per cent. of cases of exophthalmic goitre fail to respond to treatment and have a limited duration. About 50 per cent. are cured, or nearly cured, by medical treatment. The remainder have alternations of improvement and relapse. The mortality after operation varies much in the hands of different operators.

136. The treatment of exophthalmic goitre is still involved in controversy. It is generally held that medical treatment—prolonged rest, general

hygiene, tonic and sedative measures—should first be tried. Cold applications to the thyroid are worthy of trial (they were favoured by Trousseau), but counter-irritation is useless or hurtful. X-rays and radium are relied upon by some observers. The value of drugs is debated. Wilks thought that the only useful drug was belladonna. Strümpell speaks favourably of ergot. Bromides and cardiac tonics have their place. Murray advises arsenic. M'Carrison commends hydrobromide of quinine. Lockhart Gillespie reports good results from the iodide and bromide of strontium. Thyroid extract seems occasionally useful, but more often does harm. Surgical treatment, usually in the form of removal of a portion of the thyroid, has been largely practised, and good results are reported by Kocher, the Mayos, Berry, and others. Further experience regarding the indications for operation and the results obtained is desirable. The mortality of the operation is considerable. The possibility of traumatic myxœdema has to be taken into account.

Diabetes.

137. Errors in the diagnosis of diabetes mellitus arise in the following ways: The urine may not be abundant or of high specific gravity; sugar

may be temporarily absent; thirst and wasting may be slight or unnoticed; the first symptoms of the disease may relate to the eyes, skin, or nervous system.

138. Diabetes is more often overlooked in the child than in the adult.

139. Diabetes resembles tabes dorsalis in three points—loss of the knee-jerk, perforating ulcer of the foot, darting pains in the legs.—*S. Gee.*

140. The Allen treatment (treatment by alimentary rest) is of great value in diabetes, but relapses are common. Much depends upon the patient's intelligence, staying power, and submission to routine. Insulin has proved to be a remedy of much potency. Its use must be combined with the usual dietary restrictions.

141. Diabetic coma is often promptly controlled by insulin. Under treatment by alkalies the mortality was formerly very high.

Cancer.

142. In the following cases enquire for cancer: Hæmaturia in a patient over thirty years of age, no other cause being ascertainable; hæmorrhage after the menopause; dysphagia in a patient over forty years of age; painful dyspepsia arising for

the first time without known cause in a patient over forty years of age; obstinate constipation in an elderly patient. In rare cases cancer may exist without pain.

143. Do not suggest cancer to a patient until you are fairly sure of its presence.

144. Cancer and syphilis, though their effects are often found in the same body, do not, I believe, make progress together; when one is active, the other is slow or stays; and sometimes they appear in nearly alternate progress, as if in a strife for which shall kill.—*Paget.*

Tubercular Peritonitis.

145. Tubercular peritonitis often improves, and may get well under general tonic and hygienic treatment. The ascitic type is more favourable than the adhesive. The value of mercurial applications to the abdomen, and of tuberculin, iodoform (or other antiseptic remedies) is doubtful. Removal of the fluid may be advisable. Laparotomy has its advocates. Heliotherapy is of great value.

Cupping.

146. Cupping and scarification are favourite methods of treatment in various affections by the French School.

Hiccough.

147. In cases of obstinate hiccough the first thing is to empty the stomach by emetics, or, better still, by lavage.

Skin Diseases.

148. I used to have a short rule of advice to outpatients who had skin disease, that they should take very little of anything that was either strong, salt, sour, or sweet—a very good rule which you, too, may find useful.—*Paget.*

149. An attack of psoriasis is a certificate of good health.—*Jonathan Hutchinson.*

150. Feigned eruptions are not uncommon, especially in war-time. They usually take the form of wheals, bullæ, abrasions, or ulcers. Their seat is often suggestive.

151. Never give an opinion on a doubtful rash until you have seen it by daylight.

Water Cures.

152. In many of the various water cures water itself—externally and internally—is the most important element.

Heliotherapy.

153. Heliotherapy is of signal value in many conditions, notably in pulmonary tuberculosis, surgical tuberculosis, chronic adenitis, and rickets. Insolation is one of the factors in the results obtained at high altitude stations.

154. *Dove non va il sole va il medico.—Italian Proverb.*

155. Patients undergoing sun cure who do not pigment do less well than others.—*Rollier.*

156. Sunlight has a marked analgesic effect.—*H. Gauvain.*

157. While heliotherapy is of much value in the treatment of tuberculosis, care is necessary in its application, as undue exposure is capable of stimulating the disease to fresh activity.

VII.—PHILOSOPHICAL

1. Nature does nothing in vain.—*Aristotle.*

2. To unlearn is as hard as to learn.—*Aristotle.*

3. In all arts and sciences both the end and the means should be equally in our control.—*Aristotle.*

4. There are three principal stumbling blocks in comprehending truth which hinder well-nigh everyone: The example of frail and unworthy authority; long-established custom; the sense of the ignorant crowd; and the hiding of one's own ignorance under the pretence of wisdom. In these every man is involved, and every state beset. For in every act of life, or business, or study, these three worst arguments are used for the same conclusion—this was the way of our fathers, this is the custom, this is the common view, therefore should be held.—*Roger Bacon.*

5. There is one unerring mark by which a man may know whether he is a lover of truth in earnest, viz., the not entertaining any proposition with greater assurance than the proofs it is built on will warrant.—*John Locke.*

6. *Non fingendum aut excogitandum sed inveniendum quod Natura faciat aut ferat.—F. Bacon.*

7. *Prudens interrogatio dimidium sapientiæ.—F. Bacon.*

8. Nature is only conquered by obeying her.—*F. Bacon.*

9. The first distemper of learning is when men study words and not matter.—*F. Bacon.*

10. Men mark when they hit, and never mark when they miss.—*F. Bacon.*

11. *Tota in minimis existit Natura.—Malpighi.*

12. Study the child, for it is certain you do not understand him.—*J. J. Rousseau.*

13. I am of opinion that our first duty is to enquire whether a thing be or be not, before asking wherefore it is.—*William Harvey.*

14. Nature resorts to vascularity when she has work to do.—*John Hunter.*

15. Never ask me what I have said, or what I have written, but if you will ask me what my present opinions are, I will tell you.—*John Hunter.*

16. John Hunter, when challenged regarding an inconsistency in his teaching, replied: "Perhaps I did say so and so. I hope I grow wiser every year."

17. That study [medicine] greatly enlarged the field of my observations, enriched me with knowledge of which the true value to me as a writer can be appreciated only by those who are themselves doctors. Those studies also exercised upon me a directing influence, and it is probably thanks to medicine that I have succeeded in avoiding a number of errors. Knowledge of natural science and of scientific methods has obliged me to keep myself constantly on my guard. I took care, whenever possible, to conform to scientific truth, and when that was impossible, I preferred not to write.—*Goethe.*

18. I am patient, for I remember that every evil is attended with some good.—*Beethoven.*

19. It is true that the results of experiment must be recorded by a mind stripped of hypotheses and preconceived ideas. But we must be careful how we proscribe the use of ideas and hypotheses when the work in hand is to set experiments on foot, or imagine means of observation. Here, on the contrary, we shall soon see the imagination must be given free course; the idea is the principal root of all reasoning and invention; to it is due all the credit for every kind of initiative. To stifle or drive it away under pretext that it might do harm were folly; all we need is to regulate it and provide a criterion for it.—*Claude Bernard.*

20. Nothing can be done without preconceived ideas; only there must be wisdom not to accept their deductions beyond what experiments confirm.—*Pasteur.*

21. In the field of experiment chance only favours the mind that is prepared.—*Pasteur.*

22. I never had the courage to kill a bird in sport, but when it is a question of an experiment I am deterred by no scruple. Science has the right to assert the sovereignty of its aims.—*Pasteur.*

23. In the development of the human mind a fertile error is of infinitely more value than a sterile fact.—*Luciani.*

24. Though there appears to be something in the phenomena of living beings which cannot be explained by ordinary mechanical, physical, and chemical laws, much may thus be explained; and we may without fear push these explanations as far as we can, so long as we keep to the solid ground of observation and experiment.—*Johannes Müller.*

25. Science consists in the power of prevision based upon quantitative knowledge.—*G. H. Lewes.*

26. The true, the only aim of science is unity. —*H. Poincaré.*

27. Feeling is the pioneer of knowledge.—*Wundt.*

28. Without hypotheses there is no useful observation.—*Charles Darwin.*

29. My success as a man of science has been due to the love of science, unbounded patience in long reflecting over any subject, industry in observing and collecting facts, and a fair share of invention and of common sense.—*Charles Darwin.*

30. Whenever a published fact, or a new observation, or thought came across me which was opposed to my general results, it was my rule to make a memorandum of it at once, because I had found by experience that such facts and thoughts were far more apt to escape from the memory than favourable ones.—*Charles Darwin.*

31. The public are wise enough to follow scientific men when they agree on any subject.—*Charles Darwin.*

32. A man must cultivate the habit of careful observation and of cautious thinking.—*Paget.*

33. One must do one's learning and one's thinking for oneself.—*Lord Acton.*

34. It is the just balance of the cognitive and the affective conditions which is essential for a well-balanced mind.—*F. W. Mott.*

35. The intellectual life is a graft on the affective life; it is of later development, and knowledge, as Ribot says, is not a master, but a servant.—*F. W. Mott.*

36. The value of experience is not in seeing much, but in seeing wisely.—*W. Osler.*

37. Like everything that is good and durable in the world, modern medicine is the product of the Greek intellect.—*W. Osler.*

38. By the neglect of the study of the humanities, which has been far too general, the profession of medicine loses a very precious quality. —*W. Osler.*

39. Sydenham was called "a man of many doubts," and therein lay the secret of his great strength.—*W. Osler.*

40. The maternal instinct is psychologically, physiologically, and racially the most unique, the most wonderful, and the most important thing in the world.—*T. S. Clouston.*

41. Habits are formed only in the service of the instincts.—*W. MacDougall.*

42. Habit is second nature! Habit is ten times nature.—*Duke of Wellington.*

43. Though it is false and mischievous to talk of hereditary vice, it is most true and wise to

observe the mysterious fact of hereditary temptation.—*Walter Bagehot.*

44. It makes all the difference in the world whether we put truth in the first place or in the second place.—*Archbishop Whately.*

45. There is no error so monstrous that it fails to find defenders amongst the ablest men.—*Lord Acton.*

46. For my part, I am guided by experience, and I always make haste to discard error when I find it out.—*T. W. Coke.*

47. Any man will go on improving so long as he is *bonâ fide* dissatisfied with his work.—*S. Butler.*

48. The habit of generalising without a basis of facts, and of theorising on vague impressions, affords an agreeable occupation to one who has acquired it, but little instruction to others.—*Rutherford.*

49. The one test of truth is this, Will the new proposition enter into systematic connection with the rest of our experience, so as to constitute one rational and intelligible whole?—*Herbert L. Stewart*

50. An educated man knows when a thing is proved and when it is not. An uneducated man does not know.—*Lord Morley.*

51. Education, sanitation, and the rest are but the giving or withholding of opportunity.—*W. Bateson.*

52. Instinct has the same relation to intelligence that vision has to touch.—*H. Bergson.*

53. Pain is the psychical adjunct of a protective reflex.—*C. S. Sherrington.*

54. Instead of considering pain as an evil, from the biological point of view we ought to consider it the fundamental element in human progress, for as instinct is blind, intelligence is necessary to avoid pain.—*Richet.*

55. *La souffrance et la lutte—qu'y a-t-il de plus normal? C'est l'échine de l'univers.—Romain Rolland.*

56. *La maladie est bien faisante souvent . . . Qui n'a jamais été malade ne s'est jamais connu tout entier.—Romain Rolland.*

57. Pity as an emotion passes; pity as a motive remains.—*E. L. Trudeau.*

58. If there be a calling which feels its position and its dignity to lie in abstaining from controversy and in cultivating kindly feelings with men of all opinions, it is the medical profession.—*Cardinal Newman.*

59. The aim of evolution is the domination of feeling and instinct by discriminative mental activities.—*Henry Head.*

60. The great discoveries of science are made like those of evolution, not by imperceptible mass movements, but by the sporadic birth of penetrating genius.—*W. Bateson.*

61. Evolution is not a force but a process, not a cause but a law.—*Lord Morley.*

62. Heredity does not only transmit characters; it transmits also the impetus in virtue of which characters are modified, and this impetus is vitality itself.—*H. Bergson.*

63. From childhood onwards man is essentially *the* imitative animal. His whole educability, and in fact the whole history of civilisation, depends on this fact.—*William James.*

64. We try to build up first, character, the quality which has governed the world; secondly, to train in clear thinking and to learn not to go beyond the evidence; thirdly, to impart particular knowledge and experience.—*Clifford Allbutt.*

65. To be a good nurse one must be an improving woman; for stagnant waters, sooner or later, and stagnant air, as we know ourselves, always grow corrupt and unfit for use.—*Florence Nightingale.*

66. Immorality is the letting loose of instinctive action owing to defective volition. Immoral acts are, therefore, liable to occur in all progressive degenerations of the nervous system, because the more recently acquired volitional motor system (the pyramidal tract) suffers dissolution at an earlier date than the instinctive (cortico-rubral) system.—*W. H. B. Stoddart.*

67. *Lorsque les hommes seront persuadés que le but final de la vie est la mort naturelle, accompagnée d'un instinct particulier, comparable au besoin du sommeil, une des plus grandes causes du pessimisme actuel devrait disparaître. Il est même probable que l'approche de la mort naturelle est accompagnée d'une sensation des plus douces qui puissent exister sur la terre.—Elie Metchnikoff.*

68. We are not taught to think decently on these subjects [the relations of the sexes], and consequently we have no language for them but indecent language. Physiologists, who have a technical vocabulary, find no difficulty.—*G. Bernard Shaw.*

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