Clinical guide, and syllabus of a course of lectures, on clinical medicine and pathology / By W. W. Gerhard.

CLINICAL GUIDE,

AND

SYLLABUS OF A COURSE OF LECTURES,

ON

CLINICAL MEDICINE AND PATHOLOGY.

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CLINICAL GUIDE.

Students who commence a systematic course of clinical studies, experience great difficulty from the want of a sufficient familiarity with the objects which are to be pursued by them. The difficulty arises partly from the want of previous accurate knowledge of disease, and partly from the want of correct habits of analysis and classification of morbid phenomena.

The course of lectures in which I have for some years been engaged, has been less instructive than it otherwise might have been, from the want of a systematic guide book, to point out the prominent objects of the student's pursuit, and to assist him in the acquisition of the new facts which are constantly presented in the wards of an hospital. Under the most favorable circumstances these facts can only be learned by degrees, and at a considerable sacrifice of time and labour. But as medicine is daily assuming more and more of the aspect of a demonstrative science, students who hope to obtain an elevated, or even a respectable standing in the profession, will be in some measure compelled to devote a more sedulous attention to the formation of correct habits of investigation.

The object of this syllabus is two fold, and is naturally divided into two parts. The first, will contain a general enumeration of the symptoms and pathological phenomena in various diseases, especially those which are important in diagnosis. The second will refer to each distinct affection, the symptoms which are present in a sufficiently considerable proportion of cases to give it its peculiar character. The pathognomic symptoms which are in themselves sufficient to distinguish a disease from all others, are indicated whenever they exist. The accidental or occasional symptoms, which are often of much importance in therapeutics and prognosis, are also pointed out, although they do not form part of the series of symptoms which constitute the peculiar characters of each disease, and are, therefore, not essential for diagnosis.

The syllabus is a concise guide to my private course of lectures upon medicine, and is intended to facilitate the studies of

my pupils, as well as of those students who attend the lectures, which are given at the Blockley Hospital and other clinical institutions. It may also be of some utility to students, attending systematic courses of lectures in the medical schools, or preparing for their final examination.

As the object of the guide is merely to assist the studies of pupils, it is intentionally concise, forming in some measure an index to a work on practical medicine, whose pages are to be filled by the observation of the student, and the lectures of the clinical teacher. It is designed to be as accurate, but not as complete as possible; many particulars are omitted which would appropriately find their place in a larger treatise; but in the present instance, they would rather interfere with the end in view.

The guide may be used in the amphitheatre of the Hospital. By looking over the symptoms of each disease, it can at once be perceived whether the lecturer has called the attention of the class to every symptom; that is, whether he has stated its presence or absence. Then by either marking each symptom as it is demonstrated, or by noting it on a blank sheet of paper, the student will not only fix in his memory the phenomena of each disease, but he will possess a little work of some value for future reference. By this method of study, he may be thoroughly convinced of the great truth, that the practice of medicine should be taught as a demonstrative, as well as a didactic science, and he will be able to verify the statements of his teacher, by that personal observation of the phenomena of disease, which is indispensable to the practitioner.

In order to render this study of disease more complete, I have adopted such a classification as experience has shown me to be most convenient. It is necessarily imperfect; the materials for a complete nosology do not exist, and the only advantage in arbitrary divisions, is the aid rendered to the pupil.

Diseases may be divided into organic and functional. In the first class, there is a material change, which is appreciable by our senses, in the structure of one or more of the organs. In the second class, the disordered function or symptom is not attended by any

appreciable lesion. Each of these classes is again divided into acute, and chronic affections, and into general and local.

The division into acute and chronic diseases is obviously convenient in practice, and aids the diagnosis to a great extent; that into general and local diseases, is much more arbitrary, and is from its nature variable. Thus, with the progress of our knowledge, we consider a disease as a general affection, which we had before regarded as local. The converse of this proposition is equally true. In speaking of a disease as general or local, we therefore only mean, that in the present state of our knowledge we use these terms to facilitate description and classification.

Organic diseases are generally more fatal than purely functional disorders, but several of the latter class are extremely mortal, as tetanus and hydrophobia.

Local organic diseases are those in which the important symptoms, especially such as endanger life, are local, and are nearly, but not altogether, in proportion to the anatomical lesions found after death. These diseases can be in a great measure imitated by wounds and other accidental injuries of the same organs. They include the class of external inflammations. The local affections are usually under the control of art, and require a depletory treatment. They include both acute and chronic diseases.

General organic diseases are often chronic, as the tuberculous and cancerous diseases. Certain epidemic dysenteries, fevers, scurvy, and gangrene, are acute. The diseases which are usually chronic, as tubercles, do, however, sometimes assume a more acute form, especially when complicated with inflammation. General diseases are less manageable than local; they can be rarely cut short by treatment, which is more useful in obviating the secondary inflammations that so often accompany them, and prove the immediate cause of death, than in absolutely terminating the affection itself. Still, if by art, we are enabled to keep within its natural limits, a disease which would, if left to itself, greatly distress or even destroy the patient, we are scarcely less useful than we would be, if our power in checking its progress were greater.

Functional disorders without appreciable organic lesion, are both acute and chronic, and constitute a large class of affections. Sometimes they are a mere symptom occuring during the course

of an organic disease, as cephalalgia during the course of fevers. At other times, acute functional disorders simulate inflammations, and require both care and experience to discriminate them. Thus, pleurodynia is readily confounded with pleurisy; various local pains, occurring in hysteria, with the acute phlegmasiæ of the viscera. But the acute functional disorders most commonly assume the form of neuralgiæ, in which the character of the pain contrasted with the slight vascular disturbance, is sufficient to point out its true origin. These acute affections are, however, by no means limited to pain; they assume at times every variety which the change in the function of an organ can produce, and are frequently puzzling as to diagnosis and treatment. In such doubtful cases, the method of diagnosis by exclusion is most useful; by this means we are frequently enabled to affirm, that the absence of unequivocal signs of organic lesion, is conclusive proof that the disturbed function depends upon a cause which is connected with the nervous organization of the part, and not with a material change of structure.

The chronic functional disorders in like manner, are sometimes mere symptoms of a distant local affection, and at other times independent. They include most cases of mania and a multitude of hysterical affections, most frequent in women, many cases of dyspepsia, &c. In short the functional disorders of our economy, are at least as numerous as its organic lesions, and much more difficult to manage.

We can refer most of the diseases now admitted by nosologists, to one of these two divisions; but nothing can be more arbitrary than the classification and even the nomenclature of many affections. The difficulty is enhanced by the circumstance, that many lesions which are separated as distinct diseases from others of a similar nature, are in reality the effects, and not the cause of diseased action. Thus, the word hydrothorax is now scarcely employed—the symptoms to which it was applied are still observed, but it is now known that they depend upon a disease of the heart, of which the effusion of serum into the cavity of the chest is only a consequence. Hence our nomenclature, and still more our classification, change in proportion as our knowledge becomes more accurate; although it is not the less necessary for convenient re-

ference to arrange the different forms of disease in accordance with the facts we now possess.

SEMEIOLOGY AND DIAGNOSIS.

On this subject I shall confine myself simply to the points which are most necessary for the pupil. By semeiology we mean the symptoms of disease, studied with reference to the internal changes with which they correspond. Diagnosis is the art of distinguishing one disease from all others, and is based on the comparison of the symptoms we observe in a particular individual, with those known to exist in other cases, in connexion with the order of time in which they appear. A more refined kind of diagnosis consists in discriminating the particular variety and stage of the disease. In this kind of diagnosis, prognosis, or the art of determining the result, is included.

The signs of disease are either physical, that is, derived from a knowledge of the physical condition of the organs, and obtained by physical examination, or functional. In common language the term symptom is confined to the functional signs. The organic diseases admit both these means of diagnosis; the functional can be distinguished by the latter only. The physical signs are most applicable to the diseases of the thoracic cavity. We shall enumerate them briefly.

The physical signs of disease are derived from an inspection of the exterior, from palpation or examination by the touch, and from auscultation and percussion. Of these, the two last are by far the most important.

The *inspection* of the exterior of the body indicates distension from a change of structure in the organs, whenever that is carried to a sufficient extent to dilate the parietes. Thus in the abdomen, dropsy and tympanitis are visible from the distension of the skin; extreme enlargements of the liver and other organs, are capable of being recognized by the sight. In the thorax, emphysema, pericarditis and pleurisy with large effusion, produce an obvious dilatation of the chest. Pleurisy after adhesion has occurred, and phthisis, cause contraction.

Palpation, assists the mere ocular inspection. By passing the fingers carefully over the surface, we obtain a more distinct idea of many slight elevations than could be afforded by the sight alone; we can also by this means estimate the degree of sensibility of the surface, and to a certain extent of the internal viscera. If we desire to ascertain if the sensibility is confined to the surface, we pass the tips of the fingers lightly over the skin; but if we wish to examine the internal viscera, we press gently and equally with the whole hand.

Percussion is vastly more important than either of the above means of examination. It is performed most conveniently by placing the fore finger of the left hand upon the surface, and then tapping quickly but lightly upon it, with one or more of the fingers of the right hand. The dorsal or the palmar surface of the fore finger may be struck, but care is always to be taken, to strike with the extremities, and not with the pulps of the fingers. Percussion enables us to distinguish between gas, which always gives a clear resonant sound when contained beneath the part percussed, and a solid or liquid mass, which always yields a sound more or less flat. In practising percussion, we are therefore obliged to recollect constantly, whether the part upon which we percuss, is in the normal state, sonorous or not; in other words, whether or not, it naturally contains air.

Auscultation, or the art of distinguishing by the ear the sounds produced in particular parts of the body, in health and disease, is practised by applying the ear directly to the part, when it is immediate; or by using a tube called a stethoscope, to conduct the sound, when it becomes mediate. For most purposes, the direct application of the ear is preferable. This means of examination is most useful in the diseases of the thorax, but is occasionally employed in those of the abdomen.

In ausculting the chest, the following points are to be observed. The natural sound of respiration is chiefly heard during the act of inspiration, and over the greater part of the chest, is merely a soft, regular murmur, with very little blowing sound. But near the largest bronchial tubes, that is, at the root of the lungs, between the scapulæ, and at the summit of the right lung, the inspiration assumes a more blowing character, somewhat similar to

that produced by blowing through a pipe, and the expiration, which is scarcely heard elsewhere, becomes more distinct. These blowing sounds are still mingled with the soft murmur produced during the inspiration by the dilatation of the vesicles, although they constitute an approach to the bronchial respiration. They are owing to the large size of the bronchial tubes in these parts of the lung, and to the comparatively small proportion of vesicular structure which is there found.

By starting from these facts, we can readily understand the phenomena produced by disease of the lung. When the bronchial tubes are enlarged, or when a cavity continuous with the bronchial tubes is formed, we have an increase of the blowing or bronchial sounds of the respiration, with a corresponding diminution of the vesicular murmur. When the tissue of the lung around these dilated bronchi or cavities is hardened, this blowing respiration becomes still more intense, especially during the expiration. Even if no positive dilatation of the tubes exist, the mere hardening of the tissue around the larger bronchi will produce similar phenomena, but they will be less limited, and less intense, than if a well defined cavity communicated with the bronchial tubes. In proportion as the sounds of respiration become rude and blowing, they receive different names corresponding to different states of the lung. These are

1. *Rude or rough respiration.*—The vesicular murmur is usually more feeble than natural, but the blowing sound more distinct in both inspiration and expiration. In another variety, the vesicular murmur is exaggerated, although the blowing sound is vastly more developed than in the natural state. In the first kind, the hardening extends gradually and equally around the tubes; in the second, hardened masses are scattered throughout the still permeable tissue of the lung.

2. *Bronchial* respiration occurs when the tubes are dilated, and also in simple but complete hardening of the tissue around the larger bronchi. No murmur of vesicular expansion is heard, but the air sounds as if blown through a tube in the inspiration, and seems to reverberate back again during the expiration. This sound is at times so strong that it is called tubal inspiration; it is then impossible to resist the conviction that the air is really blown

through a continuous tube, such as in fact, is formed by the hardened walls of the bronchi. The tubal respiration occurs in the second stage of pneumonia, phthisis, &c.

3. *Cavernous respiration* is precisely similar to the bronchial, but is more concentrated, because the air enters into a defined cavity. It occurs in phthisis and gangrene of the lungs.

4. The *Amphoric*, is a modification of the cavernous respiration, more diffused, more metallic in its character, and arises from the hardened walls of a very large cavity; or from the pleura, in pneumothorax.

These various modifications of the respiration, are attended with peculiar changes in the resonance of the voice, which is heard more and more strongly, in proportion as the respiration becomes more decidedly bronchial or cavernous. When the respiration is cavernous, the corresponding modification of the voice is called pectoriloquy; when bronchial, bronchophony. The state of the bronchial mucous membrane, is known by the rhonchi; thus, sonorous and sibilant rhonchi, which give rise respectively to a cooing and to a whistling sound, indicate thickening of the larger or smaller bronchial tubes. The moist rhonchi, are the mucous, the sub-crepitating, and the crepitating. In the first, the sound resembles that produced by irregular, but large bubbles of liquid; when this is very intense, it is called gurgling. The other moist rhonchi are caused by smaller and regular bubbles in the vesicles and finer tubes.

We also derive important indications from the feebleness of respiration. It is very feeble in catarrh, emphysema, and the first stage of tubercular diseases. The respiration is very loud or puerile in the sound lung, which remains healthy after its fellow has become much diseased.

The sounds of the heart, are in the natural state, regular; the first is the more dull and prolonged, and occurs during the systole; the second is more sharp and short, and is heard during the the diastole. When the valves are diseased, or even when the blood is driven with extreme rapidity through the heart, these sounds become rough. According to the degree of roughness, they are then called either bellows, or rasping sounds. By the force of impulsion of the heart against the thoracic parietes, we estimate the thickness of its walls.

The Functional Signs of Disease.—These are in part those alterations of function that we observe ourselves, and in part the sensations experienced by the patient, and communicated by him to the physician. The former class admits of the same certainty of evidence as any other kind of knowledge obtained by means of our senses. The evidence of the latter class is less positive than that of the former, and the symptoms may vary with the degree of sensibility of the patient. Both classes of symptoms assist us in determining the condition of the internal organs, by the particular signs proper to them. We examine them in an order which is, to a certain extent, systematic, though not regularly so. The following method, is that which the experience of a number of years has shown me to be the most expeditious and convenient.

We should first begin by observing the decubitus or the position of a patient, and should ascertain whether it be equally easy in all situations, and whether it be maintained by an effort of the individual. By this means we obtain a general idea of the state of his cerebral functions, and ascertain if particular positions give pain in the abdomen or thorax.

The color of the skin and the expression of the countenance furnish us with valuable indications in chronic diseases, and in certain acute affections, especially with cerebral disorder. The capillary circulation which is slow in fevers attended with stupor, and in pneumonia, is very active in inflammatory fevers, &c. and is deficient in anemia. The exanthematous diseases present peculiar eruptions, which constitute their pathognomonic signs; cutaneous eruptions also attend both typhus and typhoid fever.

The cerebral functions should be examined. If they are in the normal state, the inspection is quickly made; but if any disorder is present, more caution is necessary. The intelligence, the memory, the state of the senses, the cutaneous sensibility, the functions of motility, and the strength, furnish the signs of disorder of a functional or organic character in the brain. The sleep and speech are often altered in cerebral disorders.

The deglutition may furnish signs which are connected both with the brain and the organs of the throat. But in affections of the throat we have the usual local signs; redness, pain and swelling, besides the mere functional disorder.

The functional signs of thoracic affections are, pains of a sharp lancinating character, if the pleura be inflamed; but limited to a dull, obtuse uneasiness, if the disease be seated in the tissue of the lungs. The characters of the cough are also various in different pulmonary diseases. It is loud and sonorous, if it depend upon hysteria, or the inflammation of the larger bronchial tubes; but suppressed, and very short, in pneumonia and pleurisy. It is very slight in the early stages of phthisis; but in the latter stages of pneumonia, bronchitis, and phthisis, loose and mucous. The expectoration is nearly absent at the commencement of catarrh; but in the second stage it is mucous and abundant; in pneumonia it is small, viscid and transparent, and sometimes of a reddish or rusty color; in the third stage of this disease, it is muco-purulent. In phthisis, although the sputa are very scanty in the earlier periods, yet when tubercles begin to soften, the thick gum-like sputa, followed by the appearance of irregular, rounded masses, diffused through a thinner liquid, are almost pathognomic characters.

The severe dyspnœa contrasts with the slight cough and expectoration in diseases of the heart or aorta, and in pulmonary emphysema. But dyspnœa is present to a greater or less degree in nearly every affection of the thorax.

The symptoms connected with the organs of digestion are very numerous, and require an examination of nearly the whole alimentary canal. Besides the external means of examining the abdomen, we have the aid of sight to ascertain the state of the tongue and the adjacent membranes. The presence of a coating upon the tongue does not necessarily indicate the state of the stomach, yet if it exist to great degree, it shows that the febrile movement is considerable, especially at night, and a thick coating usually coincides with a disorder of the digestive functions. Dryness and redness of the tongue denote a more intense degree of fever, and the presence of a thick dark mucus upon it and the teeth, not only prove that the secretions of the mouth are changed, but that they dry rapidly in consequence of stupor or coma preventing the constant closure of the mouth. Impaired appetite and thirst indicate either fever or a functional disorder of the stomach, at times unattended by inflammation. Vomiting, at the beginning of a disease, occurs in gastric fevers, in the exanthemata, and

in various cerebral inflammations. In the latter case, it becomes an important sign, especially in children. Diarrhœa, if large and sudden, is usually a simple functional disorder of the alimentary canal, but when the stools are small, and accompanied with pain, the mucous coat of the colon is inflamed. Ulceration of this coat is recognized by the persistence of the diarrhœa, and by its frequent recurrence after a temporary abatement. When the ulceration is a consequence of phthisis, the diarrhœa is more chronic than after simple ulceration, and often ceases entirely for the space of several days. Besides the frequency of the stools, we are accustomed to examine their appearance, to detect the presence of blood, lymph, or pus, as well as to estimate the relative proportions of bile, mucus, and ordinary fœcal matter.

The secretion of the kidneys has acquired a new importance since the researches of Dr. Bright, who has ascertained that a certain proportion of dropsies are produced by a disease attacking the cortical portion of the kidney, and known by albuminous deposits in the urine. We note the quantity of uric acid contained in the urine, as well as its scantiness or abundance. The characters of the urine vary in many diseases, and diabetes has, as its pathognomic character, an abundant and sweetish urine.

From time to time new symptoms are discovered, in proportion as our means of investigating disease become more accurate. The examination of the various secretions by chemical tests, is one of the most important of these new modes of inquiry. The results now ascertained are not sufficiently numerous for the study of the pupil.

The diseases which are enumerated in this guide, are far from constituting the whole number admitted into a complete nosological arrangement, but they are the most important diseases, because they are the most freqnent and the most severe. I have followed the order which is already laid down, and have grouped together those affections which seem to present sufficient analogy, beginning at the more simple, and proceeding to those which are more complex. In each class, I have selected the disease which has been best studied, in order to obtain a point of comparison for the others, and have therefore sometimes placed at the beginning of a particular series, a disease which is more complicated than

those which follow. If this arrangement be not strictly logical, it certainly offers other advantages which are sufficiently considerrable to induce me to adopt it. Among these advantages, is the necessity of beginning the study of a class of diseases by one which has been examined in all its bearings, and will therefore require more patient and accurate investigation.

The first class is that of the simple inflammations.

INTERNAL INFLAMMATIONS.

These diseases are usually attended with an excited circulation, a tense hard pulse, and injected skin, with pain and uneasiness in the part affected. After death, the usual phenomena of inflammation are found, that is, reddening and thickening; in protracted or violent cases, more or less complete disorganization of the tissues, and alteration of the secretions. If the inflammation be carried to an extreme degree, then we find pus, lymph, ulceration, or gangrene. In a more chronic form, it is much more difficult to state with precision, the symptoms and lesions of inflammations. The sensation of pain is obscure or reduced to a mere uneasiness, and the febrile reaction is comparatively slight. Under these circumstances the inflammation becomes latent. The same obscure symptoms occasionally attend acute inflammations, especially in persons of dull sensations. We cannot therefore expect to discover all the phenomena of inflammation in each case, but we make our diagnosis from the presence of several of them, with nearly the same certainty as if all could be detected.

PNEUMONIA.—We begin with the inflammation of the tissue of the lungs, because the disease is frequent, is attended with decided symptoms, and can be recognized with certainty, especially after it has proceeded to its second stage. The first stage is not always of difficult diagnosis; but as the symptoms are less marked, it requires greater skill and longer experience on the part of the observer. The third stage may be readily distinguished when the disease has been watched from the beginning, but if the patient is not seen until the affection has already attained this degree, then the symptoms are obscure and may easily be confounded with those of other pulmonary affections.

Symptoms of the first stage of pneumonia.

A.—Symptoms common to it and other inflammatory diseases. Chill, followed by fever, thirst, cephalalgia, and generally pain in the side affected, or in other and distant parts of the body.

B.—Symptoms proper to the inflammation of the lung. Cough, expectoration scanty, whitish, mucous, slight dyspnœa. Crepitating rhonchus, if the inflammation be near the surface of the lung; rude respiration if distant. Percussion, a little less clear than usual.

Pathological Anatomy.—Tissue of the lung engorged with reddish serum, still crepitating, but little heavier than natural, of a brighter red than when there is mere mechanical congestion.

Duration from a few hours to several days.

Second stage. Flushed countenance, frequently almost purple, with a circumscribed redness at the centre of each cheek. Dulness of intelligence, at times amounting to stupor, delirium, or even coma; dryness of surface, fever, dyspnœa, high irregular respiration from 24 to 50 in the minute. Anorexia.

The local symptoms are pain as in first stage. Short, dry cough, viscid, transparent expectoration, often of a brick red tinge. Bronchial respiration, bronchophony, flat or dull percussion. Crepitating rhonchus in the inspiration only.

Duration from one to fourteen days.

Pathological Anatomy.—Tissue of lung impermeable to the air, of a dull red color, granulated, hard but friable, reddish liquid exuding on pressure. Bronchial mucous membrane red and thickened. Pleura covered with a coating of coagulable lymph, and studded with bright red points.

Third stage. *A.*—Intelligence nearly as in the second stage. More frequently stupor than delirium. Countenance bronzed but less flushed. Fever, dyspnœa, respiration of nearly the same frequency as in second. Greater prostration of strength.

B.—Mucous rhonchus, mingled with sub-crepitating. Flat percussion. Obscure vesicular murmur. Bronchial respiration and bronchophony less marked and confined to the larger tubes.

Pathological Anatomy—Tissue more friable, of a yellowish or grayish tinge, not distinctly granulated, breaking on pressure into a yellow puriform pulp. Bronchial tubes thickened of a dull red color, and containing a puriform liquid.

Treatment.—Venesection, throughout the first six days, from ℥ss to ℥xxx according to strength of subject; it may be repeated unless prostration ensues. Cups to the affected side, after venesection. Blisters at the close of the second and in the third stage. Tartarized antimony, in tolerably robust subjects, gr. ss. every two hours, increasing to ¾ of a grain, diminishing after third day. If less robust, gr. 1-4th or 1-6th or 1-8th or ipecacuanha gr. j. either alone or combined with calomel gr. ss. to gr. j. every four or six hours. Diluent drinks, rest, and restricted diet. In the third stage, the debilitating remedies must be suspended; and if the strength of the patient fail, a more nutritious diet and even stimulants are requisite.

VARIETIES.

1. *Typhoid Pneumonia.*—Similar in essential points to the above mentioned disease, but attended with great loss of strength, rapid passage to the third stage, and less complete hepatization. It occurs in subjects of bad constitution, in the aged, and at the close of typhus and typhoid fever. It requires less depletion, a more free use of blisters and stimulating expectorants.

2. *Latent Pneumonia*, so called, because the functional signs are nearly, if not quite absent; it can be recognized by the physical signs; in practice it requires local more than general treatment.

3. *Pneumonia of Young Children* is without pleurisy, generally double, begining in scattered lobules, which become indurated one after another; rarely passing to suppuration, and almost always follows bronchitis.

The three last mentioned varieties, all require a less active depletory treatment, than simple pneumonia. We rely more on stimulating expectorants, as senega, squill, &c. when there is much depression; and we give the antimonials when the fever is more acute. The pneumonia of young children is most successfully treated by occasional emetics of ipecacuanha followed by the same remedy in nauseating doses; attention must also be paid to keeping the surface warm, and to frequent changes in the position of the child, for if he be allowed to lie constantly upon the back, the mechanical gravitation of the blood increases the inflammation.

BRONCHITIS, or the inflammation of the bronchial mucous membrane, occurs both as a primary and secondary affection. In the latter case, it is consequent upon another disease of the lung,

as phthisis and pneumonia, or upon a febrile affection. Whether it occurs as a primary or secondary disease, its symptoms differ but little.

Symptoms. In the first stage there is cough, slight dyspnœa, expectoration entirely wanting, or composed of the ordinary mucus of the bronchi. Slight febrile reaction, clear sound on percussion, and feeble respiration, with sonorous and sibilant rhonchi, if at all severe. In the second stage, there is a loose mucous cough, with whitish semi-transparent expectoration, and mucous, and sub-crepitant rhonchi; these are heard most distinctly towards the base of the lungs.

The appearances after death are, various degrees of reddening and thickening of the bronchial mucous membrane; in very severe cases, thick mucous secretion, or even lymph, in the smaller bronchial tubes.

Treatment.—In slight bronchitis, a foot bath at night, flaxseed lemonade, with the addition of a little antimonial wine, are the the best remedies; an opiate at night, such as Dover's powder, is also very useful. In more severe cases we abstract some blood from the arm, and then trust to the treatment by antimonials and diaphoretics.

Varieties of Bronchitis.—These are numerous, for no disease is more variable in its form, and more frequently connected with another affection; the following are the most important.

A.—Epidemic catarrh or bronchitis, is called influenza, and is distinguished from other kinds by the very moderate local symptoms, such as cough, and physical signs, combined with severe depression and other nervous symptoms. The influenza will bear (as a general rule) less loss of blood than simple catarrh. We use diaphoretics and opiates chiefly.

B.—The secondary bronchitis, is constant in typhus fever and measles, and frequent in other fevers. It rarely demands special treatment.

C.—Bronchitis of old persons with effusion into the smaller tubes, is called also peripneumonia notha; it is a dangerous affection, and requires cautious general bleeding, but more commonly only cups to the chest, sinapisms, and stimulating expectorants, as senega, &c.

D.—The bronchitis of young children is apt to pass into lobular pneumonia, and should, therefore, be watched carefully; ipecacuanha, and external but gentle revulsives, as sinapisms and cataplasms, are the best means.

E.—Chronic bronchitis assumes various forms. The chronic mucous catarrh, is merely the common bronchitis prolonged into the chronic form, and is most important in consequence of its resemblance to pulmonary phthisis. The dry catarrh is usually complicated with emphysema, and is known by slight nervous rhonchus, and little expectorate. In the pituitous catarrh, the pathognomonic character is the abundant expectoration of thin glairy mucus. All these varieties demand a treatment analagous to that described, but varied according to the circumstances of the case.

F.—Pertussis, or hooping cough, is a peculiar catarrh almost confined to children, known by the loud whooping sound which occurs during the inspiration which succeeds several spasmodic expirations. Although the lesions of the bronchial membrane are at first slight, yet if the catarrh continue, dilatation of the tubes will follow.

PLEURISY.—In inflammation of the pleura, the symptoms are, sharp pain in the affected side, especially felt near the nipple, short dry cough, little or no expectoration, fever, and small, hard pulse. At the beginning, chills and irregular flushes of heat; sweating is frequent after the violence of the febrile excitement has abated. The respiration in the affected side is feeble, and after effusion of lymph and serum has taken place, the percussion is dull. In extreme cases the quantity of liquid is sufficient to give rise to enlargement of the affected side.

Pathological Anatomy.—Lymph in layers on the serous membrane, effusion of yellowish turbid serum, and injection of the serous coat by minute red dots and blood vessels.

Treatment is simple, a general bleeding or two, and afterwards local depletion by cups and leeching. The nitrate of potassa and antimonials are most useful. In the more advanced stage, when the inflammation is less acute, blisters are indicated.

Varieties.—There are only two of importance; chronic pleurisy,

in which the effusion is rather purulent than serous, and tuberculous pleurisy, which is attended by a deposite of tubercles in the lungs or serous membrane. The signs are nearly the same as those indicated. The treatment should be more continued, but rather less active.

PERICARDITIS.—Inflammation of the pericardium is characterized by a dull sound on percussion, feeble impulse of the heart, slight fulness in the affected part, and often, but not constantly, a creaking sound from the imperfect coating of lymph. The pulse is at times irregular, but this symptom, as well as all other functional signs, is often absent. The most constant is pain.

Treatment similar to that of pleurisy, except that digitalis is more commonly useful.

ENDOCARDITIS, or inflammation of the internal membrane of the heart, occasionally occurs without complication, although it is most commonly connected with pericarditis. In acute rheumatism, both endocarditis and pericarditis are frequently present.

Symptoms, uneasiness, or pain in the region of the heart; rasping or strong bellows sound, and irregular contractions of the heart. In the majority of cases these symptoms are not sufficient to render the diagnosis certain, but may make it highly probable. After death, patches of lymph are found on the internal surface of the heart, and the valves are thickened, and at times ulcerated.

Treatment, as in pericarditis, with entire rest, for some time after apparent cure.

PERITONITIS, or inflammation of the peritoneum, is frequent in its acute form, as a consequence of various abdominal diseases, but is rarely primitive. The ordinary characters are, a sharp lancinating pain in the inflamed part, much increased even by slight pressure, constipation, nausea and often vomiting. Those symptoms, however, are nearly as inconstant, as the small contracted pulse which was once regarded as a certain indication of peritonitis.

The pathological lesions are similar to those of the serous membranes of the chest. Its treatment differs only in requiring

more frequent use of leeches, and calomel with opium. Purgatives are injurious during the height of the inflammation.

GASTRITIS, as a simple disease, is rare; but it is a very common complication of all inflammatory or febrile affections. Its symptoms are obscure and irregular. Dull pain at the epigastrium, tenderness on pressure, thirst, nausea, and vomiting, are the most constant.

Different degrees of redness confined to the smaller vessels of the mucous coat, thickening, softening, and a rough mucous surface, are its common anatomical characters in the acute state. When gastritis is chronic, the mucous coat is hardened, sometimes ulcerated, and usually of a dull slate color.

The *treatment* is simple; a restricted diet, mucilaginous drinks, and cups or leeches over the epigastrium, are most useful remedies.

ENTERITIS is too obscure a disease for pupils to study; it is always of doubtful diagnosis, and very rarely exists in an uncomplicated state.

COLITIS is vastly more common. When simple, it assumes the form of ordinary sporadic dysentery; but the epidemic dysenteries which are so frequent in hot climates, and occur occasionally during the summer season in this latitude, ought not to be regarded as simple colitis. There is, in such cases, a decided affection of the nervous system.

Symptoms.---Pain at the anus, in the rectum, and in the corner of the transverse and descending colon. Frequent desire to go to stool, straining, tenesmus, dejections frequent, at first fæcal, but afterwards consisting of mucus or lymph, tinged with blood. In the most severe cases, the dejections consist of pure blood, and in the latter stages are sometimes purulent.

Pathological Anatomy.—Reddening and thickening of the mucous coat, which becomes black when gangrene has occurred. Sloughing and ulceration of the intestine, are the usual causes of death.

Treatment.—In the common sporadic forms of colitis, the treatment is simple and effectual. Low diet, rest, a dose of mild

laxative medicine with one opiate, suffice. Even in more severe cases, opiate enemata, Dovers' powders, and at times leeching to the anus, almost always succeed. But in the violent epidemic dysentery, more copious depletion at the very commencement, opiate enemata and the free use of ipecacuanha as a nauseant, prove most successful. The mercurials are less used than they formerly were; they are of undoubted utility in small doses, combined with opium and ipecacuanha, and in larger quantities are admissible occasionally in the latter stages. Acids, especially the diluted mineral acids, are very useful, and neutralize the alkaline secretions of the alimentary canal. There is no disease more variable in the severity of its symptoms, and in its termination than dysentery. Hence, although the general plan of treatment is well known, every practitioner must use much discretion in following out the details.

Varieties.—Chronic dysentery is a common sequel of the acute diseases. It is always very difficult to manage, and requires a nutritious diet, but concentrated and given in small quantities, as essence of beef, tender broiled meat, &c., warm clothing, and perseverance in opiates. When the disease increases, it should be treated as the acute form.

Cholera Infantum is analogous to colitis and enteritis in some respects. We discover very unequivocal evidence of inflammation, but the cerebral symptoms are more than proportionate to the intestinal lesions. It is therefore a complicated affection, which even yet has not been thoroughly investigated. It does not form part of an ordinary clinical course.

HEPATITIS, or inflammation of the liver, is most frequent in warm climates. It is a frequent error to include in this title numerous affections of the lungs, which in reality have only a secondary connexion with the liver.

Symptoms.—Dull pain at the right hypochondriac region; tenderness; often increased size of the liver, which may be known by percussion; fœcal discharges, either pale or very dark colored; nausea and bilious vomiting. Rarely pain in the right shoulder.

The *Anatomical* changes are, increased vascularity of the liver, development of its granular structure, and occasionally suppuration.

Treatment.—Antiphlogistic; after general and local bleeding, the physicians of this country and of Great Britain are in the habit of administering mercurials. This practice, which is useful if employed with care, admits of great abuse. Acids are useful adjuvants.

The spleen is rarely inflamed, the kidneys more frequently. Their inflammation is known by thick yellowish or reddish precipitate in the urine, and by pain in the lumbar region. Both inflammation of the kidneys and liver is frequently attended with delirium and other cerebral symptoms.

MENINGITIS or PHRENITIS.—Inflammation of the membranes of the brain, is not a very frequent primitive affection; as a secondary disease, it is often the result of an external injury, or of a tuberculous diathesis, and is always alarming.

Symptoms.—Cephalalgia, agitation, delirium, febrile excitement, nausea or vomiting, constipation. Afterwards delirium, alterations of the senses, spasms, and finally coma.

The *lesions* are seated in the pia mater, which is much injected and often infiltrated with pus. When the inflammation is nearly confined to the base of the brain, the symptoms are chiefly referable to the senses and motility; when the summit is most affected, the disorder of the intelligence is then more obvious than that of the senses.

Treatment.—The ordinary antiphlogistic means; but especially local depletion, which should be used for a longer period than in ordinary inflammations. Ice to the head, rest in a dark room, revulsions to the alimentary canal and the extremities. These remedies should be used more actively, than in ordinary inflammations.

CEREBRITIS is rare; a dull heavy pain is usually the first symptom; afterwards, numbness and rigidity occur on the side of the body opposite to the hemisphere which is affected. The disorder of the intellect resembles mania, rather than acute delirium.

The *lesions* are injection of the smaller vessels of the cortical substance; softening, and in the advanced stages, infiltration of purulent matter. A defined abscess rarely occurs. These lesions are those of inflammatory softening. In the variety which occurs in old

persons, the tissue is pale, of a cream color, and the symptoms are much more slowly developed.

Treatment.—Free depletion, trusting more to general than local bleeding, absolute rest, and active purgatives. Calomel, followed by senna, answers best. After the active stage has passed, it is prudent to keep a seton or blister discharging at the neck.

Inflammation of the spinal marrow is rare; the absence of disorder of the intelligence, and the frequent spasms, or even tetanic rigidity of the limbs, are its diagnostic characters.

LARYNGITIS is not infrequent as a primitive disease, especially in children; as a secondary affection, it is very common in pulmonary phthisis, small pox, &c.

The *symptoms* are, soreness in the region of the larynx and trachea; at times severe pain, husky voice, shrill cough, and great anxiety and dyspnœa. In a very acute form, the voice soon becomes very feeble and even extinct.

The common seat is in the vocal cords and the epiglottis, which are thickened and reddened; ulceration often succeeds.

The treatment in severe cases should be decided; after general bleeding, frequent leeching, antimony, calomel, and ipecacuanha, are necessary.

CROUP is a variety of laryngitis, in which the inflammation is rapidly followed by a deposit of coagulable lymph. It extends throughout the bronchial tube.

Treatment as in ordinary laryngitis, but more active, with the addition of a warm bath. This case must not be confounded with mere spasms of the glottis, in which the voice is hoarse rather than suppressed.

ANGINA TONSILLARIS is a disease, which, although chiefly confined to the throat, is similar, in many respects, to general diseases. It is attended with a degree of fever, which is more than proportionate to the local lesion, and is not easily removed by treatment. The cephalalgia and fever may be diminished by blood-letting, and the sore throat alleviated, but not suddenly cured by gargles.

There is a chronic variety of inflammation of the tonsils and pharynx, which has become very frequent of late years in this country. The membrane is thickened and reddened. Constant external irritation and astringent gargles are useful palliatives, but the general constitution must be strengthened to produce a radical cure. Occasionally, change of climate becomes necessary.

GENERAL ACUTE DISEASES.

TYPHOID FEVER, or dothinenteritis, is a disease which of late years has been thoroughly studied.

Symptoms.—First stage, prostration more than proportionate to the local symptoms, dulness of intellect, cephalalgia, wandering pains throughout the back and limbs, dizziness and at times epistaxis. Diarrhœa in about half the cases. Anorexia, chilliness, and irregular fever.

Second stage. Increase of cerebral symptoms, dulness of hearing, tinnitus, and often delirium. Increase of fever and dryness of skin, diarrhœa, flying pains throughout the abdomen with tenderness, especially at epigastrium and right and left iliac regions, tympanitis, enlargement of spleen, anorexia, eruption of rose colored papulæ on the abdomen and thorax, sudamina at the neck and groins, cough, sibilant rhonchus.

Third stage. (If of favorable prognosis.) Persistence of diarrhœa, and other symptoms of second stage, gradual diminution about the end of the second week, and convalescence usually at the end of the third. If unfavorable, sordes on teeth, stupor or even coma, muttering, delirium, great prostration, diarrhœa more abundant; at times, with discharges of blood per anum; rigors.

Pathological Anatomy.—Thickening and secretion of whitish matter into the glands of Peyer and their sub-mucous tissue. Enlargement of mesenteric glands and slight softening of the spleen. In the *second* stage, increased alteration of agglomerated glands, commencement of ulceration and injection of adjacent mucous tissue; softening as well as thickening of mesenteric glands and spleen. Other lesions are less constant; as reddening and thickening of bronchial mucous coat, rarely pneumonia, often gas-

tritis or softening of the large intestine. The lesions of the brain are various, usually injection of the membranes or effusion of serum, but they are almost never sufficient to explain the violence of the cerebral symptoms. In the *third* stage, the glands of Peyer are ulcerated; the ulcers present irregular, excavated edges; sometimes distinct yellow sloughs in the second and third stage precede the ulcers. Mucous membrane around them reddened, but not necessarily much altered in consistence. The mesenteric glands are softened, reddened, and often infiltrated with pus. Spleen, less enlarged than in the other stages. The lesions of other organs are numerous, and indicative of secondary inflammation, but they are neither constant nor peculiar. Amongst these lesions, pneumonia is the most important, as well as the most frequent.

Treatment.—It is now admitted that typhoid fever cannot be cut short abruptly; therefore, in mild cases, in which the symptoms of no particular organ indicate unusual gravity, it is expedient to interfere but little with the course of the disease. A moderate bleeding, of ℥x to xiv, is sufficient, with diluents, acids, and neutral and effervescing draughts. The main object of treatment is to prevent or remove the local inflammations, which cause the greatest uneasiness to the patient, and often destroy life. Thus, if there be much flushing of the face, with intense cephalalgia, cups, leeches, or cold applications will prove useful; if the diarrhœa be intense, an opiate enemata of gtt x to xv tinct. opii. may moderate it. Pneumonia requires a local depletory treatment. If the stupor and other nervous symptoms be severe, and if the disease be accompanied with gangrenous sloughs on the sacrum and other depending parts, the treatment with the chlorides of soda and lime is most useful. Quinine, and a more nutritious diet, are proper in the latter stages, when the fever is passing off, or when the powers of the patient begin to fail. Laxative enemata, or even mild cathartics, are indicated when the fœcal discharges are much altered from their natural appearance, or are temporarily suppressed. The value of the exclusive purgative practice, which has been recommended of late, is not yet sufficiently tested.

Varieties.—The chief varieties of typhoid fever consist in the

various complications which so frequently occur during its progress. Thus, even in very mild cases, there is some risk of perforation of the intestine, and effusion of the fœcal matter through the ulcerated opening, into the cavity of the peritoneum. This accident is not frequent, but when it occurs, it almost inevitably proves fatal. Various organs at times suffer more than in their due proportion. Thus there are cases of typhoid fever, (one of which I witnessed in the last summer,) in which the cerebral symptoms are so intense, as to resemble those of meningitis.—Tuberculous disease is also frequently developed in the last stage of the fever. All these varieties demand corresponding changes in the treatment. It sometimes occurs as an epidemic, when it is excessively violent, and it would appear that, under these circumstances, the fever occasionally becomes contagious.

TYPHUS FEVER is often confounded with the typhoid, but differs from it in many particulars. It is commonly epidemic, and is manifestly contagious, unless free ventilation be employed.

Symptoms.—Pains in the head, back and limbs, generally more severe than in typhoid fever. Occasional, but not frequent epistaxis. Nervous symptoms similar, in most respects, to those of dothinenteritis, but with much more profound stupor. Dull suffusion of the eyes. Towards the end of the first week, there is a petechial eruption, extending nearly over the whole body, in which the spots are neither so prominent, nor of as bright color as in dothinenteritis. In very severe cases, the petechia are sometimes of a purple tint. Sudamina are often present, although not quite so frequently as in typhoid fever. The pulse is frequent, varying much in character, but commonly soft. Slight cough, mucous and sub-crepitant rhonchus in both lungs, with feeble respiration. The percussion is often dull at the same part from congestion. The abdominal symptoms are much less marked than in typhoid fever. Less anorexia, less thirst, and rarely diarrhœa. The skin is very hot, dry, and exhales an offensive odour. The *lesions* formed after death are extremely variable. There is no constant alteration analogous to the intestinal lesions in typhoid fever. The intestinal canal is more healthy, than it is

in the majority of febrile diseases. The blood is more constantly changed than the solids.

Treatment.—There appears to be no specific treatment for typhus. By watching the symptoms, especially by obviating cerebral dulness and other symptoms of congestion in the early stages, we can usually diminish the severity of the attack. When the fever is high, sponging with the solution of the chloride of soda, and cool acidulated drinks are most useful. As soon as the fever declines, extreme prostration often occurs, and requires tonics and wine. Purgatives are useful to diminish the cerebral symptoms. The saline diaphoretics, especially the acetate of ammonia are extremely useful.

INTERMITTENT FEVER is characterized by a succession of regular paroxysms, consisting of a chill, a hot, and afterwards a sweating stage. Quotidian intermittent occurs every day, tertian every second, and quartan every third day. The only lesions are enlarged spleen, and occasionally gastritis.

Treatment.—To diminish the violence of a paroxysm, we may abstract blood either in the hot or cold stage, preferring the latter. A purgative is often necessary, and as soon as a complete intermission is obtained, the sulphate of quinine should be given. In quotidian fever, five grains at a dose may be given, nine, six, and three hours before the paroxysm; in the tertian, one grain every hour; in the quartan, a grain every two hours is sufficient. As soon as a single paroxysm is passed without an attack, the quantity of quinine should be reduced.

REMITTENT FEVER differs from intermittent. The paroxysms are less distinct, so that the fever has a strong disposition to run into the continued type. The lesions are similar to those of intermittents. The treatment should be directed against the local inflammation, and as soon as a tolerably complete apyrexia can be obtained, quinine is given nearly in the same manner as in intermittents.

BILIOUS FEVER is usually of the remittent type, but offers the complication of disordered action of the liver, which gives to

the whole skin a deep yellow tinge. It is usually a disease of a much more active inflammatory character than simple remittent, and requires blood-letting, after local depletion at the epigastric and hypochondriac regions, followed by purgatives, preferring the mercurials and saline purgatives.

YELLOW FEVER does not form the subject of a clinical lecture, as the disease is only met with in particular seasons and localities.

THE EXANTHEMATA are all characterized by febrile movement, attended with a peculiar cutaneous eruption, and have a definite duration. The internal organs are more or less affected during their course, and each of these diseases produces lesions of some of the internal organs more frequently than others.

MEASLES, or RUBEOLA. General signs, chilliness and fever, cephalalgia, soreness of throat, coryza, cough, mucous or sub-crepitant rhonchus. Towards the close of the eruption, there is often diarrhœa. Death occasionally follows from severe pulmonary inflammation. The eruption appears about the third day; at first in the form of simple red points, a little elevated; afterwards running together, so as to form irregular circles and semicircles. It fades from the eighth to the sixteenth day. The treatment is limited to simple diluents, and avoidance of cold, in slight cases. When the local inflammations are severe, the case must be treated as if they had been primary diseases.

SCARLATINA is divided into the simple, the anginose, and the malignant varieties. Although this distinction is not entirely precise, it is founded in nature. In the simple variety, there is almost no fever, but merely an eruption of raspberry red points, which are scarcely elevated above the level of the skin, and in the hands and feet, and occasionally the trunk are sufficiently confluent to assume the appearance of a uniform reddish dye. In the anginose, there is severe inflammation of the throat, fever, and occasionally delirium and subsultus. In the malignant, the eruption is slow in appearing, or dark colored, and there is extreme prostration, delirium, and often coma. This variety is

frequently complicated with gangrene of the throat. The treatment of the simple variety is limited to cooling drinks, and rest. In the anginose, leeching to the throat, antimonials, ipecacuanha combined with calomel, and occasionally venesection are indicated. In the malignant, tonics and stimulating gargles afford the best chance of recovery.

VARIOLA.--Small pox is characterized by an eruption, which appears after a smart fever, lasting from three to eight days. At first it is papular; about the third day, it becomes vesicular; and on the seventh and eighth, pustular. Crusts form after the fourteenth. There is no constant internal inflammation in small-pox, but when the eruption extends as far as the pharynx, inflammation of the larynx may follow, and prove fatal. The cooling treatment of Sydenham is pursued; cool air, diluents, saline laxatives; rarely blood-letting.

The slighter exanthemata, such as roseola, varioloid, and varicella, are scarcely the subjects of remark by a clinical teacher; nor are they sufficiently important to claim a separate place.

GANGRENE is a general disease, which is commonly acute. It may declare itself in several of the internal organs, but is most frequent in the lungs, in adults; and in the mouth, in children. There is a variety of gangrene which is a consequence of inflammation, but the ordinary kind is obviously independent of it, and requires a tonic treatment, and nutritious diet. To this, opiates and the chlorides may be added.

THE TUBERCULOUS DISEASE is one of the most important of general affections. It is so called from its anatomical character, which consists in a yellow homogenous substance, called tubercle; generally rounded, but occasionally assuming other forms, and deposited in the mucous follicles, or in the tissue of the organs. Facts seem to prove, that it is a direct secretion from the blood-vessels, which is deposited in consequence of a disorder of the general constitution. Sometimes this disorder arises from accidental circumstances; but it often appears without obvious cause, especially if hereditary. The influence of local irritation in determining the deposits of the tuberculous matter,

is limited. The local inflammations, arising during the course of a tuberculous disease, are usually consequences of it. As the general disturbance of the economy is less easily studied than the local symptoms, physicians are more familiar with the tuberculous disease, under the names of chronic peritonitis, consumption of the lungs, &c., than with the characters of this disease, considered without reference to its particular seat. Both the curative and preventive treatment depend, however, upon the study of the general features of the affection.

Symptoms of General Tuberculous Disease.—Dusky, or pallid color of the skin; in florid complexions, a peculiar bright red and white hue; absence of the soft gloss of health; sensibility to cold; emaciation, even if the appetite and digestion are but little impaired; irregular, slight febrile movement; anxious, restless expression; paleness of conjunctivæ, and very constant feeling of uneasiness, which is not in proportion with the local symptoms. (These symptoms may exist alone, or combined with the local signs of disease, afterwards enumerated.)

Predisposing circumstances. *Age*, most frequently occurring between the ages of fifteen and twenty-five years. *Sex*, rather more frequently in females. Delicate, slender frames more subject to it than the more robust. Hereditary causes are powerful, especially if, at the birth of the patient, the parents were actually laboring under a tuberculous disease. The treatment consists in abundant exercise in the open air, change of climate, travelling, and stimulation of the skin by frictions. Internally, iodine, especially in combination with iron, promises more than other remedies. The food should be nutritious.

1. *Pulmonary Phthisis*, or *Consumption.*—The most frequent and most important variety of the tuberculous affection. So called, because the tubercles appear earliest, and are most developed in the lungs, although not confined to these organs.

Symptoms.—In addition to general symptoms, we have, in the first stage, cough, at first slight and dry; afterwards, attended with a little mucous expectoration; slight and variable uneasiness in the chest, and sharp, lancinating pain, if complicated with pleurisy; fatigue on taking exercise, and occasionally a little dyspnœa. The percussion is clear, even more clear than in most

subjects, from the absence of fat. Towards the close of this stage, a little dulness appears at one or the other clavicle, or at supra spinal scapular fossa. In the second stage, the local signs are more decided; the percussion at the summit of one or both lungs is quite dull, and the respiration is very rude or bronchial, with increased resonance of the voice; the cough is more troublesome; hæmoptysis occurs more frequently than in the first stage, and the expectoration is opaque, and more viscid. The general symptoms increase. In the third stage, we have well defined hectic, mucous rhonchus, and afterwards gurgling at the summit of one or both lungs; pectoriloquy. Diarrhœa and colliquative sweats are the common precursors of death.

The special treatment consists in diminishing local inflammation by cups, and counter irritants; supporting the strength, and calming the cough by opiates. The general treatment as in general tuberculous disease.

2. *Tubercles* in the intestinal canal are frequent, and although they are usually a consequence of the pulmonary affection, they often occur primitively. They are seated chiefly in the follicles. We diminish the diarrhœa arising from them, by opiates.

3. *Tubercle* in the lymphatic glands, is termed scrofula, when external. In children, the bronchial glands are most affected.

4. *Tubercular* inflammation of the serous membranes, is very frequent, and although it is often a mere consequence of pulmonary phthisis, yet in some cases, the tubercles are deposited in these membranes as early as in any other part of the body. They all offer the signs of sub-acute inflammation of the particular membrane, with little evidence of general tuberculous disease.

The *tuberculous* inflammation of the arachnoid, is the most important, from its danger, and its frequent occurrence in children. The tubercles and granulations are deposited at the base, and occasionally at the summit of the brain. The symptoms are less violent than those of ordinary acute meningitis, but more permanent.

Tubercular peritonitis is also common, and nearly always occurs as a chronic inflammation. The gradual emaciation, and the moderate effusion of liquid, added to the usual symptoms of peritonitis, are its signs; more especially if it be primitively chronic,

for chronic peritonitis scarcely occurs in young subjects, except from tubercles.

Tubercular pleurisy is frequent during phthisis, and before its developement. It differs but little from ordinary pleurisy, except that it is occasionally double. In most cases, our diagnosis is based upon the same signs as in ordinary pleurisy, combined with evidence of phthisis, or general tuberculous disease. Pericarditis is seldom complicated with tubercles.

The tuberculous inflammations of the serous membranes require the ordinary treatment, but depletion should be used less vigorously.

Tubercles in other parts of the body are usually latent.

CARCINOMA is a disease which is also general. It becomes apparent only when sufficiently advanced to appear externally, or derange the functions of a particular organ. Several pathological lesions have sufficient affinity to be classed under this head, as scirrhus, the encephaloid matter, &c. Their diagnosis is always obscure, but is based partly upon the absence of the signs of tuberculous disease, and partly upon the peculiar straw-colored tint of the skin, and the emaciation. The local signs of disease of particular organs also aid us in the diagnosis, which is always obscure, and derived rather from negative than positive evidence.

LESIONS FOLLOWING DISEASES.

The alterations comprised under this head are commonly considered as distinct diseases, but careful observation shows that they are mere changes of structure, or disorders of functions, consequent upon changes of structure produced by diseased action. This class is necessarily very variable, for in proportion as pathology becomes more definite, the number of mere lesions increases In progress of time they may become still more numerous; but we have not yet a sufficiently accurate knowledge of pathology to reject a number of diseases, which will probably be afterwards regarded as mere lesions.

Alterations of the heart. Valvular thickening of various kinds follows inflammation, and is occasionally a mere consequence of

the progress of age. Hypertrophy and dilatation of the heart, can be proven in most cases to result from one of these causes; but in a certain proportion of patients, the chain of proof is not complete. These alterations are recognized by changes in the rhythm and sounds of the heart, as well as in the force of its contraction. These sounds constitute a series of signs which are readily learned.

The lungs are the seat of various secondary lesions; dilatation of the bronchial tubes; adhesion of the pleura, and contraction of the chest after the cure of pleurisy; fistulous cavities which follow the cure of the third stage of phthisis. The most important is pneumothorax, which results from perforation of the pleura, and the consequent communication of this cavity with the bronchial tubes.

The liver is often the seat of organic lesions, such as the hardening following protracted intermittents, and the fatty liver of phthisis. Various forms of thickening, and even of scirrhus, result from chronic inflammation of the alimentary canal.

DROPSY is a disease which is obviously a mere consequence of the lesion of particular organs, except in the rare cases in which an effusion of liquid into the cellular tissue occurs from suppressed perspiration, and in some forms of anemia. The diseases of the heart, and the particular degeneration of the kidneys described by Dr. Bright, give rise to anarsarca. Ascites is the consequence of diseased liver, or of peritonitis. Hydrothorax, of diseases of the valves of the heart.

In all cases of dropsy, our object is, therefore, to inquire into the organic lesion upon which it depends. The palliative treatment consists in removing the water by means of purgatives and diuretics; afterwards, we resort to means calculated to remove or lessen the organic cause.

FUNCTIONAL DISORDERS,

WITH LITTLE VASCULAR EXCITEMENT.

This class is so numerous and ill-defined, that an attempt to arrange most of these disorders into a connected series, would be

at present misplaced. There is, however, one obvious division. Some of these diseases are unconnected with the nerves of sensation and motion, and others are dependent upon their irregular action.

1. In the first division of functional disorders, are included a multitude of mere symptoms that are often regarded as distinct affections. These symptoms are occasionally relieved by a palliative treatment, but no radical cure can be expected, unless the original point of irritation be removed. In selecting a palliative treatment, some caution is necessary; for a functional disorder of a distant organ, occasionally serves as a sort of revulsive for that which is primitively affected, and if artificially suppressed, may give rise to serious mischief.

The functional disorders which most nearly resemble organic diseases, are various forms of dyspepsia without inflammation, disordered function of the alimentary canal, including both constipation and diarrhœa, and cough, independent of pulmonary disease. In women, the purely functional disorders are very numerous, and include numerous uterine affections, without organic change of the womb. The symptoms are, however, rarely limited to the uterus; but very soon extend to numerous and distant viscera. Vertigo and flushing of the face, are also frequently the effect of irregular nervous action, and are sometimes treated by repeated blood-letting, to the manifest injury of the patient. The same mistake often occurs with palpitation of the heart, unconnected with organic disease.

The *diagnosis* of these affections is nearly always based upon two circumstances. One is, the general temperament of the patient, which will generally give numerous signs of a highly susceptible nervous system; and the second is, the absence of signs of organic disease. In organic diseases, we usually meet with positive signs; when these are wanting, a disorder of a function occurring without vascular excitement, should be regarded as nearly, if not quite, unconnected with inflammation or other organic change.*

* We use the word organic, not merely to signify a lesion of an incurable character, but to denote all changes in the structure of an organ of a kind which is appreciable by our senses.

The treatment of these disorders cannot be readily indicated, except as applicable to individual cases. A plan of treatment proposed of late years by Mr. Teale, often proves successful. It consists in applying cups or leeches, and afterwards counter irritants to the spine, at the part from which the nerves that supply the affected organs arise. In addition to this treatment, tonics, both mineral and vegetable, baths of various kinds to suit the particular case, and the limited employment of stimulant or evacuant remedies, to preserve, as far as possible, the natural action of the viscera, are most useful.

NEURALGIÆ. The second class of functional disorders are connected with the nerves of sensation and motion, and include the affections known under the name of neuralgiæ. Various spasmodic disorders, as hysteria, chorea, and often epilepsy, are of the same nature. The general characters of neuralgic pains, are extreme violence, rapid change from one part of the body to another, quick subsidence and recurrence in the part primitively affected. These pains have a singular tendency to assume the intermittent character, and many of them are the immediate consequence of intermittent fevers. They frequently resemble these affections in their termination, which in many cases is attended with fever and sweating.

The neuralgiæ are sometimes confined to the course of a single nerve, and the filaments arising from it, as in tic doulourreux and sciatica; but in numerous cases they are diffused throughout the fibrous and muscular tissues. Neuralgic pains of the internal viscera are more injurious to the general health of the patient, than those of the external organs. In the intestines, they are usually called colic; in the stomach, gastralgia, &c. Sick head-ache is a form of neuralgia, which is attended with nausea, and is relieved by free vomiting, or by neutralizing the acid secretions of the gastric mucous membrane. It is not consistent with the object of this guide, to detail all phenomena offered by the neuralgiæ, which sometimes are sufficiently permanent to simulate inflammations.

The *diagnosis* of the neuralgiæ is not difficult when seated in the limbs. The peculiar character of the pain, the absence of

heat, swelling and other signs of inflammation, and its mobility, are sufficient to distinguish neuralgiæ from organic disorders. When redness and heat supervene, and constitute a complication, the case becomes a mixed one, and it is necessary to inquire into its primitive symptoms in order to detect its neuralgic character. The internal neuralgiæ are rather more difficult, but the same principles must guide us, and by attending to the characters of the pain, the general nervous temperament of the patient, and the absence of the ordinary signs of inflammation, we shall rarely be mistaken.

The *treatment* is directed towards two distinct objects; to relieve from present suffering, and to prevent a recurrence of the paroxysm. The first indication is attained by warmth to the affected part, anodyne fomentations and liniments, and occasionally leeches. In very severe cases, cups or leeches should be applied to the spine. The more permanent treatment consists in the continued use of gentle counter-irritants to the spine, and along the course of the affected nerves, with tonics, especially the preparations of iron in high doses. When the neuralgiæ assume a distinctly paroxysmal character, quinine and the arsenical solution arrest them, nearly as certainly as an intermittent fever. When the pain is very intense, narcotics and diaphoretics should be administered until free perspiration occurs.

RHEUMATISM is a disease, which, in its origin, appears to be of a strictly neuralgic character; but the acute variety is complicated with the ordinary signs of inflammation, except that suppuration is rare, and the disease rapidly changes from one joint to another. The articulations, and the muscular and fibrous tissue, are chiefly involved, although a severe case of acute rheumatism rarely terminates without the inflammation of one or more of the internal serous membranes. Those which are most frequently inflamed, are the pleura and the pericardium. The signs and the course of these inflammations, are precisely those of their primitive form. The fever of acute rheumatism is usually more violent than that of ordinary inflammation, and the blood is covered with a thick coating of fibrine.

The *treatment* of acute rheumatism is not yet settled. When

an internal serous inflammation occurs, it should be of the active depletory character. But the influence of blood-letting upon the disease itself, is merely palliative. Sometimes a free cupping to the spine will terminate the disease, especially if limited to the shoulders. Opium alone, or in the form of Dover's powder, is also useful, with anodyne fomentations to the painful parts. Tartarized antimony and colchium afford a temporary relief, but it is usually limited to the time during which their operation continues. The same remark applies to drastic purgatives.

CHRONIC RHEUMATISM most frequently attacks the fibrous tissues. It is closely connected with neuralgia, and one of the most effectual modes of treating it, consists in free cupping to the spine. When the pain is very diffused, Dover's powder at night, with the sarsaparilla decoction during the day, are amongst the best remedies. The variety which follows venereal affections, is most readily cured by producing a slight mercurial effect.

GOUT differs from rheumatism in attacking the smaller joints of the foot and hand. The external applications are of a soothing kind, like those used in rheumatism. The internal medicines, are the preparations of colchium with opiates, and occasional saline laxatives.

The diseases which are not treated of in this course, are omitted, partly because they are less important, and partly because they cannot be so readily made the subjects of clinical demonstration. Of this kind are the chronic cutaneous affections, which are comparatively rare in this country, and the various diseases peculiar to women. As the object of the syllabus is rather to serve as a guide to the observations of the student, than to supply the place of a systematic work, the omission is less to be regretted.

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