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## SURGICAL DIAGNOSIS.

### CHAPTER I.

#### INTRODUCTORY.

THE art of diagnosis is that by which different things are distinguished from one another. The use of the term "diagnosis" is almost limited to medical literature, and there it is employed in two senses: first, to signify the process whereby we arrive at the distinction between different morbid states; and, secondly, to signify the result of that process. Hence the "diagnosis" of a case is oftentimes synonymous with the name of the disease or injury from which the patient is suffering. In this book an attempt is made to study the process of diagnosis, and to put the student in possession of knowledge, the application of which to any given case will enable him to determine the nature of the patient's ailment.

There is no natural distinction between medicine and surgery, but a separation of medical and surgical affections is so convenient, and is so generally understood and approved, that no excuse for dealing with the subjects of medical and surgical diagnosis in two volumes need be given. It has been thought best to limit the subject of surgical diagnosis by excluding reference to surgical affections of the eye, ear, larynx, and the female pelvic viscera, partly because this is in accord with a prevailing custom, and mainly because it would



require too much space to discuss the various special means of diagnosis, instrumental and other, which have been introduced by those who have devoted themselves to the study of these diseases. My aim is to afford a guide to the diagnosis of those cases of injury and disease which may be met with in the surgical wards and out-patient rooms of our hospitals. If some of my readers are disposed to cavil at the limits I have assigned myself, I would remind them that all sound *principles* of diagnosis are of general, not merely of local, application, and may be employed with as much confidence in the special surgery of the eye, ear, larynx, and pelvis, as in what is known as the general surgery of the trunk and limbs, and that all that is required in any case, in addition to the principles of diagnosis, is correct anatomical and physiological knowledge, aided by acquaintance with the methods of investigation of the particular organs. At the outset I would urge upon the student the importance of grasping the fact that the *principles of diagnosis* are of more value and importance than any given application of them, and that he should endeavour always to look through and behind the application to the principle itself. In other words, the knowledge of *why* certain signs or symptoms justify or compel a given diagnosis, is the key to correct diagnosis, and is the essential point for students to grasp. For this reason I shall make but very scant reference to so-called "pathognomonic signs" or "diagnostic tips," which are of value, if at all, only to the experienced, and to the beginner are both sources of danger and the promoters of evil habits of mind. Similarly, tables of comparative diagnosis have been discarded. It is impossible to sketch Nature in parallel columns; and although such a method may be useful for showing in a graphic manner the resemblances and the differences of allied affections, it is an artificial and, in my

opinion, a false method when applied to the purposes of practical diagnosis. Upon the importance of diagnosis it is only necessary to say a word. Viewed in its wide and true sense, diagnosis is the essential preliminary both of successful treatment and of a just prognosis; and, although the present want of correlation between it and therapeutics forms a strong temptation to carelessness in diagnosis, it is evident that this correlation, so earnestly desired by every true surgeon, is only to be secured by a patient and painstaking study of the facts of each of these sciences. The fact that a surgeon's treatment is the same for two or more similar affections affords no justification for his failure to distinguish between cases of such affections.

The art of diagnosis can be carried to very various degrees of perfection; it is therefore necessary to remind the student that merely to assign a name, even when it is correct, to a disease or injury, may fall far short of a satisfactory diagnosis. It may be admitted that there are certain refinements of diagnosis, the practical value of which is not at present appreciated, at any rate by the majority of surgeons, and in reference to which two remarks seem called for: all such "refinements," when expressions of truth, are to be valued, and even when their practical bearing upon therapeutics and prognosis is not apparent, they must be followed out, with confident assurance that their practical benefit will become evident; but they must be carefully regarded as "refinements" and not as "essentials" in diagnosis, and only those who are masters of the art should draw them, for it is as disastrous as it is foolish for mere tyros to attempt "to run before they have learned to walk."

One of the most important points to be constantly borne in mind, is the fact that the surgeon has not simply



a disease or injury to diagnose, but a diseased or injured man. There is a great tendency to concentrate the thoughts solely upon some local lesion, and to ignore the individuality of the patient; and there is the greater tendency to this from the extreme difficulty of estimating in many cases the "personal equation" of patients, and from the close attention that must of necessity be given to the features of all local lesions, as well as from the fact that our clinical distinctions and nosological names depend in nearly all cases upon local manifestations of disease. This leads me to observe that a complete diagnosis in most cases includes three elements. There is first the recognition of the anatomical features of local lesions; then their physiological or pathological characteristics; and, lastly, the constitutional change either leading to or resulting from the local lesion. For example, to take such a simple case as an enlarged gland in the groin. The first step in the diagnosis will be the recognition of the anatomical nature of the swelling present, the fact that it is an enlarged gland and not a hernia, a varix, or a fatty tumour, etc. But this must be complemented by an inquiry into the nature and cause of the enlargement, whether it be inflammatory or neoplastic, whether the result of the absorption of irritating matters from an inflamed urethra, a chancre, or a sore on the foot, or the result of syphilitic or of cancerous infection, or, again, a part of the local manifestation of erysipelas, or a primary affection of the gland, as in Hodgkin's disease. When the pathological nature of the lesion is known, inquiry must still be prosecuted to ascertain how far the general system is implicated, whether primarily or secondarily, as by fever, exhaustion, anemia, etc. These three parts of a diagnosis do not require to be separately followed out in all cases, but they are so intimately connected together that the

threefold nature of a complete diagnosis is, for that very reason, in danger of being lost sight of.

The general method of diagnosis varies with different surgeons; some prefer to obtain first a complete history of the case, and then to make their examination of the lesions presented; while others first make their examination, and then investigate the history of the case. There is much to be said in favour of each plan, and probably each is specially suited to certain forms of disease and injury, and he will be the best diagnostician who knows when and how to employ either as may be most desirable. For beginners, however, the former and more laborious plan is much the best, as otherwise important points will be overlooked; and it is only safe to practise the more direct method when clinical experience has developed that instinct which enables a surgeon to elicit just those points in the history of a case that have a real bearing upon the diagnosis. The particular methods of diagnosis vary with the general character of the case, and with the locality of the affection. I shall try to indicate these in their proper places, and would here only mention that there are many plans which may be adopted, and possibly with equal advantages. The same case is approached in different ways by different minds, and the student must not look for uniformity among his teachers, nor can the author claim anything more for the methods and schemes advocated in this book than that he has found them to be practical and reliable.

Nothing will conduce more to the formation of habits of correctness in diagnosis than the practice of note-taking and of committing to writing the diagnosis of a case and the reasons to be urged in support of it. I would venture to press this point upon the attention of students, and to assure them that any time so spent will yield them a full reward in the



readiness, confidence, and accuracy in diagnosis it will produce.

But of far greater moment than the method employed is the precision and soundness of the data on which the diagnosis rests, and it is to this that students must first and chiefly direct their attention. Books and didactic instruction can give them but little aid here, and they must rely upon practice and the education of their senses. Care is required in making even the simplest observation, such, for instance, as counting the pulse or measuring the length of a limb. Students from the first should form the habit of taking *single precise* observations, and not trust to mere repetition for ensuring accuracy. It is only too common to see the manipulation for the detection of fluctuation repeated several times before the observer is sure of the result; similarly, a patient with a scrotal tumour is made to cough several times, before it is decided whether the act causes any impulse in the swelling or not; and many other similar examples might be given. All this is bad, and the student from the first should set his face against it, and endeavour as far as possible to obtain a thoroughly trustworthy result from a single observation; not only does this save time, but it often saves pain to the patient, and, by demanding a concentration of attention, does much to secure the condition most of all necessary to ensure accuracy of observation. It is not intended that where a single observation leaves a doubt upon the observer's mind it is not to be cleared up by a repetition of the observation, but only to insist upon the great value and importance of forming the habit of relying upon a single observation, and so of reducing to a minimum the occasions when its repetition is necessary.

It is well always to bear in mind that clinical data vary widely in value. Thus, as a rule, positive

data are of more importance than negative; for instance, the detection of fluctuation in a swelling is proof of the presence of fluid in it, but the failure to detect fluctuation cannot always be accepted as proof that the swelling is wholly solid; similarly, the detection of translucency in a scrotal tumour will prove it to be a collection of serous fluid, but its opacity is not an absolute proof that it is not a hydrocele, for there may be some special condition preventing the transmission of rays of light. This applies with even more force to the facts stated by patients or their friends than those observed by the surgeon. The fact that pain has been experienced or complained of, or that swelling, or discoloration, or some functional disturbance such as lameness, or nutritive change such as wasting, has been observed, must be accepted as of distinct and positive value. But the absence of any such history is of very different import, for it may depend not only upon the absence of these conditions, but also upon failure to observe them, upon forgetfulness, or even upon a wilful concealment of the truth. For example, it is not uncommon to find patients suffering from secondary syphilis quite unconscious of the existence of the rash or of the sore throat, and such patients, questioned years after as to the occurrence of such phenomena would of course reply in the negative, and might therefore mislead the surgeon.

Still more must such a distinction be drawn between objective and subjective phenomena, between those which can be ascertained by the surgeon himself and those for which he has to rely upon the word of the patient alone. With due care, skill, and some practice, the surgeon should in nearly all cases be able to determine the objective phenomena without doubt or error. Patients are rarely content to state subjective phenomena without either some exaggeration, or, more



often, an attempt to interpret them. It may be quite impossible to eliminate the error arising from conscious or unconscious exaggeration, but the surgeon should always be careful so to form his questions as to conceal, so far as may be, his object in asking them, and so as to elicit the simplest statement of facts without any added interpretations; and in every case he will, of course, reject such interpretation unless his own independent investigation of the phenomena convinces him that it is correct. Care should be taken also to distinguish between what may be called "common" and "skilled" evidence, and upon the class of facts which may be accepted on the strength of the one or only on the strength of the other. By this it is not meant that all evidence derived from a patient and his friends is "common," and only that afforded by a medical examination is "skilled." With the degrees of intelligence there are corresponding degrees of value to be attached to lay as well as to medical evidence, and the astute observer will not only be enabled to make the most trustworthy examination himself, but also to put its right value upon the evidence given by the patient, and will be able to distinguish between those statements which he may accept as valid and trustworthy, and those which he must take with the proverbial "grain of salt." To refuse to receive evidence on technical points from laymen, would be to make a mistake as great as to accept without question all evidence on technical points from every medical observer. The capacity of the observer to make the particular observation in point must be always considered and estimated. By practice in questioning, it is easy to obtain corroboration or the reverse of statements made by patients on technical points, and this should, of course, never be neglected.

It is not possible in the space at our disposal to go further into the rules of evidence and other allied

questions. We have, perhaps, stated enough to indicate the importance of the subject and the necessity of acquiring proficiency in the art of obtaining the data upon which to found a diagnosis.

One other remark may be made here, and it is to urge upon students the importance of appreciating the *significance* of individual data. There is a danger lest this should be overlooked, and the deplorable habit formed of resting a diagnosis upon a mere combination of signs and symptoms rather than upon the anatomical or physiological facts of which they are but the expression. An illustration will perhaps serve to make my meaning clear. Fluctuation is a sign obtained only when there is fluid contained in a cavity of some size, and it indicates little or nothing as to the character of the fluid; and yet it is not infrequent to find beginners resting their diagnosis of abscess solely upon this one sign. The observer must look behind and beyond any symptom or sign to its explanation, meaning, or cause, and diagnosis must rest not upon symptoms, but upon the conditions of which they are the expression. This may seem a trite remark, but experience in the outpatient rooms and wards, not to mention examination halls, soon shows that, like many other trite observations, it needs to be enforced. Diagnosis rests first upon accurate observation and then upon a correct appreciation of the true significance of clinical data.

Before passing on to consider the diagnosis of individual affections, it will be well to speak in somewhat fuller detail of the various chief classes of clinical data on which we have to rely. These may be spoken of under the heads of *family history*, *personal history*, *history of the cause* or *first onset* of the affection, its *course* or *progress*, the "*present state*" of the patient when first seen, and the *subsequent progress* of events, including the *effects of treatment*.