Introduction to Clinical Surgery

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In this first meeting of the class of Clinical Surgery, the following remarks of a general character, are appropriate as an introduction.

In the first place, what is the meaning of the word "Clinical"? Clinical is derived from "Klinos" which is the Greek for bed. It has come to imply the practical application of the scientific principles of Medicine to the treatment of the individual patient, who as a rule, is in bed; hence the name. According to modern usage, however, the term clinical embraces more than bedside practice because it is applied also to practice in the consulting room and in the out patient department.

Clinical practice is mainly an art, an art based on Science. Surgery, in addition is also a craft, the noblest of all crafts, because it has for its object the human body, the noblest work of the Creator.

The approach to Clinical Surgery is, in the first place, through what are known as the "Basic Sciences", Physics, Chemistry and Biology. Then through Anatomy and Physiology and finally through Pathology. These studies, which constitute the scientific basis of Surgery, are learnt in the classroom and in the laboratory.

The art of Surgery, in other words, clinical practice, can only be learnt at the bedside by precept and even more by example. The craft of Surgery can only be learnt by apprenticeship and only by those with a thorough grasp of the scientific principles.

Clinical practice includes Diagnosis, Therapeusis and Prognosis — though from the point of view of the patient, Therapeusis or treatment is the most important, it being the final object that he is seeking; from the healer's point of view, diagnosis is perhaps the more important, since without it neither treatment nor prognosis are possible. It has even been said that for the proper treatment of a patient three things are important; the first is Diagnosis, the second Diagnosis and the third Diagnosis.

DIAGNOSIS

The etymological meaning of the word "Diagnosis" is "to know through," which has come to mean to know or to recognise the disease as a pathological process, through the body of the patient; and incidentally to give it a name by which it can be identified.

It should be emphasised that the recognition of the pathological process going on in the patient's body is by far the most important element in diagnosis than the labelling. A diagnosis should be the expression of and should convey to the mind the concept of a definite pathological process; and you should stoutly resist the temptation to accept in lieu of a diagnosis, terms however high sounding, which do not convey the notion of the disease process itself. Thus, the label attached to a syndrome is not a diagnosis, and though the name, especially if couched in Greek, may satisfy the patient, it only denotes ignorance on the part of the clinician.

MAKING A DIAGNOSIS

Two distinct mental processes are involved in making a diagnosis. The first is the search for and the collection of the evidence of the presence of disease and its nature as revealed by clinical examination. The second is the evaluation and

integration of the evidence thus collected. It is important, especially for the beginner that this evaluation and integration be not undertaken before collection of the evidence is complete. Short cuts to diagnosis, unless based on extended and mature experience, often lead to mistakes, and the student should not attempt to imitate his seniors who, relying on past experience sometimes allow themselves the liberty of such short cuts.

In the clinical examination one should proceed methodically. First the history, present and past is taken; next the symptoms are investigated and then the physical examination, which should be both accurate and complete. Most errors of diagnosis are due, not to ignorance but to inadequate clinical examination, the physical signs being elicited carelessly and incorrectly or, as happens more often, not at all.

Only when the clinical examination is completed should special investigations such as X-Rays or laboratory examinations be requested and these are such as the previous examination has pointed out as necessary. In modern days it is usual to enlist the help of experts in these branches. In order to obtain the greatest help from such procedures, it is important that the experts in these branches should not be regarded as mere technicians in order to supply a series of X-Ray films or a series of figures in a report — their full collaboration can only be secured if they are made cognisant of the case and of the special problems it presents. This collaboration often implies bedside discussions with the specialists concerned. Finally it may also be necessary to resort to exploratory procedures. In surgery such exploratory procedures may be more easily resorted to, but a word of warning is necessary: there is nothing more fallacious or more harmful than a "look and see" policy. An operation requires adequate planning and such planning cannot be adequate unless it is based on a diagnosis as complete as possible. Even such simple procedures as exploratory punctures, if lightly undertaken may lead to disastrous results — instances have been known when a needle, meant to explore for the presence of a pleural effusion was driven into the hypertrophied heart, and of a trochar meant to evacuate a supposed ascites being pushed into the pregnant uterus.

The way to acquire accuracy in eliciting physical signs is to practice the methods of physical examination repeatedly until they become thoroughly familiar; and this is what students are expected to do during their hospital training. My earnest advice is to miss no opportunity of acquiring experience in physical examination. Completeness is acquired by proceeding in an orderly manner, according to a set scheme. Such methodical examinations should be practised repeatedly until they become almost automatic.

WRITING UP NOTES

Writing up notes of a case makes for completeness and accuracy of the clinical examination. It is remarkable how often omissions in eliciting some physical sign are discovered when the notes of the case come to be written up.

The notes should be brief but comprehensive. They should be written in simple language and such terms as imply a diagnosis should be sedulously avoided. Irrelevant details often put in with the object of advertising the writer's powers of observation should be excluded. They often take the place of important points which are omitted.

THE HISTORY

The taking of an accurate history of the case is not easy. Patients vary enormously in their intellectual development and often they exhibit an irritating tendency to mix up what they felt with what they have been told, or to suppress important facts either because they believe them to be irrelevant, or in their an-

xiety to impress their point of view. Others, after repeating more or less verbatim a long dialogue, will stop short just as they are about to reach the crucial point of the case.

These and other foibles have to be put with and should not be allowed to provoke an antagonistic attitude on the part of the examiner. Perhaps it is better, in the long run, to allow patients to tell their story in their own way, their memory may be helped by a few well directed questions and sometimes they have to be gently but firmly recalled when they have strayed too far from the subject. Suggestive questions are betted avoided as they often elicit misleading answers. The taking of a full and accurate history is an art which can be acquired only by experience and often requires considerable patience and tact. Students are therefore urged to practice history taking as much as possible.

EVALUATION AND INTEGRATION

It is only when the clinical examination is complete and not till then, that the second step towards arriving at a diagnosis may be taken. This consists in the evaluation and integration of the observations made.

The diagnostic importance of the various signs and symptoms varies within wide limits. They may be classified into direct or pathognomonic and indirect or suggestive. The pathognomonic symptoms, when properly elicited, lead to a correct diagnosis. Such are, for example, abnormal mobility and crepitus in a fracture or loss of power in a wound in the vicinity of a nerve. The other signs are merely inferential and have to fit in well into the general clinical picture and may be compared to circumstantial evidence in a court trial.

The evaluation and integration of indirect signs and symptoms is an art which has to be acquired laboriously all the more since clinical reasoning does not follow the ordinary rules of logic but is in reality a fine assessment of probabilities against the background of experience. The mental process has been aptly put in words by Newman from whom the following is quoted:—

"In actual questions we attain certitude in virtue of a cumulation of probabilities, independent of each other, arising out of the nature and circumstances of the case under review, probabilities too fine to avail separately, too subtle and circuitous to be converted into syllogisms, too numerous and varied for such conversion even when they are convertible. The certitude that we arrive at by these intangible and perhaps unanalysable probabilities is different from the mathematical or scientific certitude, but it is not a lesser certitude. On the contrary it is all the stronger because it is the result of our experience in life."

The student, as he gains experience, will evolve his own mental process for arriving at a diagnosis and as his background widens so will his diagnostic ability. Whilst his diagnostic acumen is developing and evolving he will do well to follow some simple rules which the wisdom of centuries has set as signposts along the way, he thus will be less liable to stray from the beaten path and will avoid pitfalls lying in the way — such rules are the following:—

1) Avoid jumping to conclusions and resist strongly making a definite diagnosis before the clinical examination is complete.

2) Avoid being led astray by imagination into detecting signs and symptoms which are expected to be present but which in point of fact are not.

3) Avoid as far as possible diagnosing rare or unusual diseases. Such diagnoses, only exceptionally, prove to be right.

4) Never make two diagnoses where one will suffice.

5) Avoid being swayed by the last fashion or the last article read.

6) Do not accept the labels attached to syndromes in lieu of a diagnosis. Such subterfuge may satisfy the patient for the time being but does not satisfy clinical conscience.

I conclude by repeating, once again, my plea for assiduity in attending the Clinical Wards of the hospital. It is here, at the bedside of the patient, as well as in the Operating Theatre and the Post-Mortem room that the foundations are laid for a clinical career and where diagnostic ability and clinical judgement are acquired which constitute the ideal goal of all those who practice the healing art.

POST SCRIPTUM

—The time having arrived when I must vacate my chair, I offer these notes and reflections, which epitomise my teaching, as a parting gift and testament to my beloved students.