# *A Primer of Medicine*

BEING AN INTRODUCTION TO CLINICAL NEUROLOGY, ALIMENTARY, RESPIRATORY AND CARDIOVASCULAR DISEASES

*by*

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LONDON

BUTTERWORTHS

1960

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MADE AND PRINTED IN GREAT BRITAIN BY
THE WHITEFRIARS PRESS LIMITED
LONDON AND TONBRIDGE

# A PRIMER OF MEDICINE

*ENGLAND:* BUTTERWORTH & CO. (PUBLISHERS) LTD.
LONDON: 88 KINGSWAY, W.C.2

*AFRICA:* BUTTERWORTH & CO. (AFRICA) LTD.
DURBAN: 33/35 BEACH GROVE

*AUSTRALIA:* BUTTERWORTH & CO. (AUSTRALIA) LTD.
SYDNEY: 68 O'CONNELL STREET
MELBOURNE: 430 BOURKE STREET
BRISBANE: 240 QUEEN STREET

*CANADA:* BUTTERWORTH & CO. (CANADA) LTD.
TORONTO: 1367 DANFORTH AVENUE, 6

*NEW ZEALAND:* BUTTERWORTH & CO. (NEW ZEALAND) LTD.
WELLINGTON: 49/51 BALLANCE STREET
AUCKLAND: 35 HIGH STREET

*U.S.A.:* BUTTERWORTH INC.
WASHINGTON, D.C.: 7235 WISCONSIN AVENUE, 14

*Published . . . May 1960*
*Reprinted . . September 1960*

This book is dedicated to my four
sources of inspiration,
my wife Jean (Ayshes Chayil)
and Joanna, Dinah and Sara
our delightful daughters.

" Much have I learned from my teachers; more from my colleagues; and from my students more than from them all."

Babylonian Talmud
(2nd century)

The author wishes to express his profound gratitude and thanks to Mrs. Helen Bamber who typed the manuscript from dictation.

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CHAPTER 1

# *INTRODUCTION*

## LEARNING AND TEACHING CLINICAL MEDICINE

THIS is primarily a textbook for undergraduates and medical students in their first clinical year. It is hoped, however, that many postgraduates working for M.R.C.P., D.P.M. or F.F.R. will also find it useful. The self-critical general practitioner who either wishes to relearn his medicine or to refresh his knowledge may find the information and advice helpful. The text is meant for all doctors, young or old.

Probably in no field of human knowledge is a true start more important and a false one more disastrous than in clinical medicine. The material contained herein is essential for a proper understanding and assessment of any larger general textbook or specialized monograph.

This book is based on my M.R.C.P. (London) course. Many students are surprisingly ignorant of what I consider to be essentials. Although they can prattle of diamond murmurs and lesser aortic clicks they cannot discuss sensibly an elementary valvular lesion. Others can declaim concerning spike waves and yet are unable to enumerate the signs of a posterior column lesion.

The pages which follow are crammed with facts but, though it is fashionable to decry factual knowledge in medicine, it is impossible to be a good clinician without possessing a large store of facts; for example, a doctor cannot safely prescribe drugs without the factual knowledge of their doses and he cannot diagnose neurological cases without a deal of factual knowledge about signs and their localizing value. Moreover, such knowledge is not acquired by inspiration but only by techniques of memorizing. " Knowledge is an essential prerequisite to performance " (Rabbi J. H. Hertz).

The phrase " essential knowledge " is purposely used in preference to the usual " basic facts ". An oft-repeated advice to students is " Master the basic facts of the subject ". But how many physicians are in agreement as to which are the basic facts of any branch of medicine? Many physicians consider that the correct way to teach electrocardiography is first to expound at length on the appropriate

electrophysics and they call this " basic facts ". But the student can become even more than merely competent at electrocardiography interpretation without such knowledge. Again, others pontify that the student must be conversant with the physics of sound and know some of the theories concerning the production of heart and breath sounds before attempting to master the technique of auscultatory appreciation. Whether or not any of these are " basic facts " is not worth arguing, but I strongly affirm that they are not essential knowledge for the clinician.

Too many people are over-concerned with the techniques of teaching and pay too little attention to what is taught and by whom. Undoubtedly the greatest of all educational handicaps is poor teaching and no system and no revision of the curriculum can overcome such a misfortune.

An important cause of poor clinical teaching is over-specialization. The narrow specialist usually lacks a broad view of medicine, is incapable of seeing the patient as a whole, is often abysmally ignorant outside his own narrow field and so, when he teaches, is very likely to give the student a completely wrong start.

A good example of lack of proper proportion may be seen in a recent textbook of general medicine written for undergraduates. In the section of less than 90 pages on cardiology, over 12 pages have been allocated to catheterization, electrocardiography and radiology, and more space is devoted to fibro-elastosis than to rheumatic chorea. Such topsy-turvydom applies to much of the clinical medicine taught to undergraduates today.

" Specialization must be grafted on to a robust stock of general medicine, for, like the hybrid rose, it will not thrive on its own roots. The narrow specialist whose field of vision is limited to his own branch of medicine is a menace both to the profession and to the patient; he sees disease through tinted glasses" (Professor Bramwell, 1959). *Clinical Introduction to Heart Disease.* London; Oxford University Press.

The super-specialist or the man who has attained eminence because of a gimmick is very liable to become a pedant, who idolatrously worships his subject or gimmick, who exaggerates the importance of his technical jargon and conceptual knowledge, who prides himself on his mastery of the trivia and minutiae of his small subject and, if perchance he is an examiner, would not hesitate to deem lack of such knowledge a serious fault.

The student, graduate or undergraduate must realize the following.

" First, the errors and limitations of these new techniques are not

at first appreciated. Often the data yielded by clinical examination are of much greater precision in the identification of disease. Second, a thorough clinical examination, which will only be carried out by doctors who appreciate its worth, is the best method of establishing the spirit of mutual understanding and goodwill which is the core of the doctor-patient relationship. Finally, to rely on data the nature of which you do not understand is the first step to losing intellectual honesty ".—Professor Sir George Pickering, Professor of Medicine, Oxford.

The clinician must always be concerned primarily with facts and only secondarily with theories. He must avoid the frequent habit of first discussing theories which attempt to explain some problem concerning the subject under discussion, instead of first making sure that he is conversant with the accepted facts.

" Theories are vast soap bubbles with which the grown-up children of learning amuse themselves, whilst the ignorant stand gazing on and dignify these vagaries by the name of science " (Rabbi J. H. Hertz).

The student must always remember that what is new is not necessarily true and what is true is not necessarily new. The latest theory is not always the most satisfactory.

" There are two kinds of fools: one says, ' This is old and therefore is good ', the other says, 'This is new and therefore is better ' " (Dean Inge).

I have attempted to follow a great teacher, Rabbi Nachmanides, who, in the 13th century, wrote " Notwithstanding my desire and delight to be the disciple of the earlier authorities, to maintain their views and to assert them, I do not consider myself a donkey carrying books. I will explain their ways and appreciate their value, but when their views are inconceivable to my thoughts, I will plead in all modesty, but shall judge according to the sight of my eyes. And when the meaning is clear I shall flatter none, for the Lord gives wisdom in all times and in all ages ".

The student must attempt to discuss the cause of anything in terms of practical clinical medicine and not theories. For example, when considering the causes of increase or decrease of muscle tone I advise the student, as indicated in the text, to list the anatomical causes of hypertonicity and hypotonicity. Many people would attempt at first to discuss the theories as to what constitutes normal muscle tone and what factors operate to keep it normal. Such an approach, though appearing to be scientific, is likely to confuse the student, though obviously it must be the method of the research worker.

When the expert discusses a subject, for example, purpura, epilepsy or steatorrhoea, he usually thinks in terms of theories of aetiology of the so-called idiopathic varieties. The student should always think primarily of known causes of the particular condition under discussion and only later mention the idiopathic group, the causes of which are speculative.

A certain type of mind automatically gets involved in theory from the outset. For example, when asked what is the Hand-Schüller-Christian syndrome, such a one will reply " It is a disorder of cholesterol metabolism and according to T. is associated with a disturbance of co-enzymes . . . ". That the evidence of disturbance of cholesterol metabolism is virtually nil, and that the chemistry of co-enzymes is a closed book to him, appear to be of no consequence. But my main argument against such an approach is that it really gives no clue as to the clinical picture of the subject under discussion. My reply would be as follows. " This syndrome is characterized by deposition of cholesterol ester in the skull and may be associated with diabetes insipidus and exophthalmos ", perhaps adding that in recent years the concept has been enlarged to include other deposits apart from cholesterol. I hope that the reader will realize that these two answers represent entirely different and diametrically opposed outlooks and attitudes.

The basis of clinical medicine is good history taking and the skilful elucidation, assessment and interpretation of physical signs. These skills can be mastered only at the expense of much time and patience—" Not learning but doing is the principal thing " (Pirkey Aboth).

Watch the expert neurologist and observe how he pays great attention to the details of his techniques and contrast his methods with the slipshod and inadequate performance of others. Surely, if such attention to detail is necessary for the expert before he is willing to arrive at a conclusion, it is even more important for the inexpert. " Trifles make perfection and perfection is no trifle " (Michelangelo). Moreover, it is important to realize that the absence of any physical sign may be just as important as its presence, and slight deviations from the normal may be as significant as grosser changes, provided that the observer can satisfy himself that the deviation is really present. Neglect of minor abnormalities and focusing attention only on the absence or presence of certain signs is a common cause of diagnostic errors. Touch, hearing and, above all, sight are the foundation stones of physical examination. Unfortunately, a student may have defective acuity of any of these senses, but even this handicap may in large numbers be overcome by diligent practice.

May practical application of the advice given in this book be the mordant which will fix things in the student's memory.

" Medicine is to be learned only by experience; and is not an inheritance; it cannot be revealed. Learn to see, learn to hear, learn to feel, learn to smell, and to know that by practice alone can you become expert " (Sir William Osler).

An inquiring mind is a necessary requisite of a good clinician. He should always keep on asking himself if he really understands the subject under discussion, and if not, he must seek out somebody who, or perhaps a text which, will enlighten him. On the other hand, he must not waste his time in the noisy discussion of the undiscussible. Which came first, the hen or the egg, type of argument is very popular in some quarters, or why any particular disease has a predilection for one part of the body and not another. The truly religious man does not claim to be endowed with any knowledge which he does not possess and no more should the teacher attempt to impress his students with smatterings of dubious validity as though he were a confidant and not merely an observer of nature.

" To discuss endlessly what silly people mean when they say silly things may be amusing but it can hardly be important. Does the full moon look as large as half-a-crown or a soap bubble? " (Bertrand Russell).

Logic is the basic science of diagnosis, drawing correct inferences from accepted premises. The accepted premises are the details garnered from a good history and correct assessment of physical signs. Today, unfortunately, is a time of diagnostic nihilism, when physical signs are decried as things of no import, especially by those who know not how to elicit or interpret them. Biochemistry, mathematics and radiology have become the rulers of clinical medicine. An English professor of clinical medicine has even gone so far as to express the view that clinical signs should not be taught at all except in neurology.

Medicine is essentially a technical skill, and the techniques should be demonstrated to students by those who know them. Such methods are the foundation of clinical medicine and without them it is meaningless. A physician's development of diagnostic talent should not be based on lucky guesswork but on a discipline of logical thinking based on the practice of skills and an extensive experience.

" We must not put our trust in intuitions unless they are supported by experience and justified by reason " (Lord Samuel). But remember that experience by itself is of no value unless it is combined with the ability to learn from experience.

Lack of method in arriving at a diagnosis is often due to miscon-

ceptions as to the meaning of diagnosis. Diagnosis should always be considered in stages and, in the great majority of cases, the stage 1 diagnosis is the anatomical one, stage 2 the general pathology, and stage 3 the special pathology. Thus, the statement that the patient has a lesion of his cerebellum is a diagnosis—true, only a stage 1 diagnosis, but none the less a diagnosis. Moreover this stage 1 diagnosis is usually the only certainty and the other two stages are often at best probabilities and may be only possibilities.

The evidence for any diagnosis is often not clear-cut but all diagnoses at whatever stage should be considered as a careful weighing of the evidence, so many points in favour of this and so many in favour of that.

" There are, I think, several factors that contribute to wisdom. Of these I should put first a sense of proportion, the capacity to take account of all the important factors of a problem and to attach to each its due weight " (Bertrand Russell).

Beware of the crime of diagnostic greed. Overwhelming evidence is not essential for correct diagnosis. The absence of some expected sign or symptom often does not invalidate a diagnosis. Before making any diagnosis the physician should always be self-critical and ask himself what points are against such a conclusion, because any such evidence should make him think of an alternative, which may be more acceptable, having fewer or less important points against it.

Too often similarities between various conditions are stressed. This in part measure arises from an uncritical passion for compiling lists of causes of signs and symptoms. More important than emphasizing similarities is to stress differences. To paraphrase a famous Hebrew saying, ask " Wherefore is this disease different from all other diseases? " This concept of the importance of differences, of distinguishing features rather than similarities, is an approach to clinical medicine which is of great value but rarely emphasized.

Another prevalent cause of confusion in clinical medicine is lack of agreement concerning the meaning of even commonly used words. Such agreement, or at least the understanding of different viewpoints, is essential for proper communication and discussion. Teachers and examiners have a great responsibility in this matter. No word or phrase should be used which cannot be defined and no technical word used which is not truly understood. So many teachers lack humility and are as illogical as Humpty Dumpty when he boasted " When I use a word it means just what I choose it to mean ".

Remember that technical jargon is not necessarily precise and in

fact often adds confusion. Do not be as foolish as the Molière character who proudly proclaimed " That must be wonderful; I don't understand it at all ". Students suffer from a type of doctor whose answer to any problem is always the invention of new terms, which rarely help and nearly always add confusion upon confusion. An aphorism of Baron Corvisart, written in 1797, is still apt: " The physician should be very conservative with regard to innovation; he should accept new words only when the need for them is clearly proved ".

For example, what cleverness or value is there in replacing the terms primary and secondary polycythaemia by erythraemia and erythrosis?

The student should avoid the use of romantic descriptions, especially if they are far-fetched, deal with something with which he is not conversant, or are borrowed from the language of a different sensory impression.

" Until you think of things as they are, not of the words that represent them, you cannot think rightly " (Samuel Butler).

Teachers and examiners are too often over-concerned with the niceties of etymology. Does it help a doctor to know that " comedone " derives from a word meaning " glutton " or that " lupus " means " wolf "? It is usually those who have little Latin and less Greek who are most vociferous with such information. Common usage determines the meaning of words and such consideration overrides any etymological aspects.

There is also creeping into medicine an increasing tendency to use ugly long compound words of Teutonic formation and pomposity, for example, corticonigropallidothalamocortical which occurs in a recent neurological textbook. Another evil is the use of unusual words when there is an accepted well-recognized phrase, for example, pallesthesia instead of vibration sense.

The use of eponyms (naming things after people) mentioned in the text has purposely been reduced to a minimum.

It is fitting and proper to pay tribute to the truly great and revere their memory, but many of those remembered by eponym have had greatness thrust upon them, rather than actually having achieved it by art of genius or genuine originality. " There is nothing new under the sun ", Ecclesiastes reminds us. Indeed, in attempting to be original in medicine it is advisable not to read too much lest you be disillusioned to find that it has all been written before. Medicine through the ages has but very rarely been advanced by the brilliant, completely original discoveries of any genius, but rather by a gradual development, a superimposition and integration of the minor con-

tributions of many. This is often forgotten by those who delight in pettifogging argument concerning priorities of descriptions, and the use of eponyms fans their windy quibblings.

The use of eponyms often causes vociferous brayings concerning exactly what Dr. A or Dr. X originally described. That Dr. A's or Dr. X's paper was written many years ago in an obscure journal, copies of which have long since been unobtainable, appears to matter not at all. Moreover, it is often those who have no knowledge of any foreign language who are most given to laying down the law on such matters. The author has heard more misinformation on this score than on any other branch of medicine.

If Dr. B did in fact describe four features of some condition, would the presence of only two or three constitute the B syndrome? If Dr. C wrote of some conditions about which our ideas have since profoundly altered because of new discoveries, should we still talk about the C syndrome, although we are discussing something that has but little resemblance to the views and facts described by Dr. C so many years ago? These are unanswerable questions but are the cause of profitless arguments. Surely the medical student has so much of importance to learn that such meanderings should not be considered to be his concern. The author sincerely hopes that questions about eponyms will cease to be the stock-in-trade that they are at present of many examiners and teachers who attach to them an unwarranted importance.

CHAPTER 2

# *HISTORY TAKING*

HISTORY taking is a major diagnostic procedure usually no less important than physical examination or investigation, and should be considered as an essential complement to these other techniques. But unfortunately many students grow up never to appreciate the true value of good history taking and never bother to practise and thereby acquire this difficult yet rewarding art.

The author strongly deprecates the ever-increasing practice of students being brought up to obtain histories from standard printed sheets which are ticked or crossed on the appropriate lines. The students must be taught and thereby gradually learn how to develop a history in logical sequence, and to appreciate how, as experience increases, the patient's primary symptoms will automatically demand the appropriate follow-up questions. A cardiologist does not need a printed sheet to remind him that a patient with dyspnoea must also be asked about swelling of the legs, or a neurologist that the patient with vertigo must be asked concerning tinnitus and deafness. It is amazing how so often in teaching hospitals the consultants themselves use such printed forms, especially in out-patient clinics.

Whilst obtaining the history the examiner's eyes must be wide open, carefully observing the patient, because he may notice many things, for example, pallor, swelling in the neck or tremor, which may give him important guides to subsequent questions.

To obtain a good history it is essential to be on good terms with the patient. The examiner's attitude must be friendly, kind and sympathetic, not arrogant and blown out with the air of feigned superiority or ultra-sophistication. It is only by adopting a friendly attitude that he will obtain the confidence of many patients and complete confidence is essential for good histories. Humility and a love of all people are two necessary ingredients of the good physician. Another essential quality to possess is that of being a good listener, allowing the patient to talk freely and in simple language and yet skilfully guiding him away from irrelevancies and towards a logical continuity of his story. But the wording of questions must be such as never to suggest a particular required answer.

It is essential to know exactly what the patient's complaints are,

and, with each individual symptom, roughly the date and more precisely the mode of onset, and how it has subsequently progressed. All possible factors, including treatment, aggravating and relieving each symptom must be carefully gone into. Of course, the questions which the examiner asks him are influenced by the symptoms, but he must not allow the patient to skip from one symptom to another before he has given a full account of each individual symptom.

The quasi-legal notion that doctors should not ask leading questions is bad advice, but such queries must be as few as possible and used to help the patient to formulate his story in a logical pattern. When he has apparently completed his voluntary history, the examiner must always ask leading questions, for example, concerning appetite, bowels, micturition and weight, if these have not previously been mentioned. In other patients other leading questions are necessary, such as in a neurological case, whether there is disturbance of vision or attacks of loss of consciousness, or in a patient with dyspnoea, whether he has pain on exertion. Good instruction and experience should teach the student the essential questions for each system.

If a patient is of poor intelligence and unable to explain himself properly, or is garrulously bubbling over with irrelevant details, then it is essential to ask direct and even leading questions, subtly guiding his conversation so as to obtain as far as possible clear answers.

The examiner must always beware of automatically translating symptoms expressed by the patient in lay terminology into technical terms. This may result in many false equations and false premises, for example, if the patient complains of unsteadiness when walking, do not automatically assume that he is ataxic; or if he complains of lightheadedness, that he has vertigo.

Do not jump too hastily to a decision as to which system is involved and therefore round which your questions must revolve. For example, shortness of breath on exertion does not necessarily imply cardiac involvement, nor difficulty in walking, neurological disease.

It is usually true to say that if after a well-taken history the clinician has no reasonable idea of the likely diagnosis, then it is unlikely that he will be much wiser after a full examination. In fact, a good history often gives the important clue to the correct assessment of physical signs.