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EDUCATION IN OBSTETRICS FOR GENERAL PRACTICE

BY

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With the continuous increase of medical knowledge there has occurred a natural and gradual division of our profession into varying branches. These branches are ever widening as our knowledge steadily grows, and we have yet further divisions and subdivisions leading into ever-narrowing specialties. There is a natural inclination for those who practise one of these specialties to regard it as complete in itself and detached from other subjects. This attitude in a teaching school would be fatal. The majority of students become general practitioners, and even those who will eventually follow some special line must be given the solid foundation of knowledge of the whole subject of medicine without bias in any one direction, specialization being left to a later date.

The Aim of a Medical School

Every teacher agrees that a medical student must begin with a good general education and a sound knowledge of the basic sciences—chemistry, physics, and biology. To this must be added a good training in anatomy and physiology and, later, in pathology. In the last three years of his training he must learn the general principles of the main clinical branches and how to apply the scientific knowledge he has previously acquired. He must be trained to take careful histories, to elicit clinical facts by exact methods of examination, and to piece these together. In this way he learns to observe, deduce, and think. There can be no attempt to teach him all that is known in any one branch: that leads to confusion. Each teacher must confine himself to principles and should emphasize the interrelation between his own and other branches of medicine.

Given this sound scientific foundation and these principles of the main branches, and having been taught to deduce and to think, the medical student is trained to remain a student all his life, capable of understanding and applying the advances which will be made and of adding to them himself. The young graduate is the product of the whole school and not of any one teacher—no matter how brilliant the latter may be—and it is only by co-operative effort of the whole teaching staff that a school fulfils its highest duty.

Value of Obstetrics to the General Training

I am asked to deal here with the teaching of obstetrics, and so far as possible I am confining myself to this.

It is impossible, however, to separate obstetrics and gynaecology in teaching, since the two are so interwoven as to form one subject, and I must therefore occasionally mention gynaecology, although more stress is laid upon obstetrics. To the common end each branch has its special contribution and each exhibits special difficulties to the teacher.

Unlike other departments, obstetrics deals chiefly with physiology—normal and abnormal—and for this reason alone would be worthy of its place in the curriculum. Another advantage is that in many schools obstetrics provides the only compulsory period of residence in hospital. The main purpose of this is to teach the student obstetrics, but in a well-run hospital he will learn much more. Seeing the patients at all times of the day and night will develop his powers of observation; he will have impressed upon him in the ante-natal department the necessity of a knowledge of general medicine and general surgery as well as of obstetrics; if he also attends domiciliary midwifery he will learn more of human nature and the handling of patients than in the whole of the rest of his medical course, and for the first time will be given some responsibility.

Some day we may waken up to the fact of the great importance of this resident work and, by co-operation with the modernized hospitals of the local authorities, make the last year of the student's course a resident one divided equally between medicine, surgery, and obstetrics with gynaecology, and unburdened by the paralysing effect of the final examination. Until that time arrives we must extract the full value which the residence for obstetrical teaching gives to the student.

The most important contribution of obstetrics and gynaecology to the general training of the student is that so much of its work is in the nature of preventive medicine. In its resolutions with regard to professional education the General Medical Council has emphasized the necessity of directing the attention of the student to the measures by which normal health may be maintained and to the principles and practice of the prevention of disease. Unfortunately for this purpose the medical and surgical wards are largely occupied with the treatment of pathological conditions and little time can be given to the study of prevention of disease. As a contrast, the time devoted to obstetrics focuses the attention of the student almost entirely on the study of the normal and on the prevention of the abnormal.

Pregnancy, labour, and the puerperium are normal physiological processes with a liability to develop varying degrees of abnormality. The whole effort of the ante-natal department is to recognize and treat these abnormalities. Recognized beforehand and the appropriate measures decided upon, few labours present any serious difficulty, while the same complications discovered only during the course of labour will often have a fatal termination for mother and child. In the ante-natal department the student sees and examines large numbers of patients in normal health and learns to recognize any divergence from this state. Those who suffer from complaints during pregnancy he sees treated in that department or in the wards, and he soon realizes the value of early recognition and treatment. In the gynaecological department he learns that a large number of these patients suffer from troubles produced at childbirth and that many of these are preventable; while in the children's department he will see many victims of heredity, bad environment, and obstetrical miscalculations.

Special Difficulties in Teaching this Branch

No doubt the teachers of medicine and surgery have difficulties inherent in their subject, but the teacher of obstetrics and gynaecology has to contend with special ones—some inherent and others of a transient nature due to the way the subject has developed.

One of the main difficulties, and one which can never be overcome, is the fact that the onset and duration of labour cannot be controlled. It is therefore impossible to hold labour ward demonstrations at prearranged times, and the teaching on normal delivery must necessarily be left to the junior members of the staff and to the sisters. Even the cases requiring major obstetrical operations must, to a large extent, be left to the younger members. The professor of obstetrics is therefore in the same position for clinical teaching as would be the professor of surgery if the major part of his teaching was limited to emergencies.

Another difficulty, but one which is rapidly disappearing, is the misconception of the lay public that every qualified practitioner is a fully trained obstetrician and therefore capable of carrying out any obstetrical operation. This leads to the worst evil of all—that the local reputation of a practitioner as an obstetrician depends chiefly upon the speed with which he terminates his cases. The aim of the obstetrical teacher is to turn out qualified practitioners who have a sound knowledge of normal midwifery. They must be able to recognize the abnormal and to deal with minor abnormalities. Unless they have resident postgraduate experience it is not their business to perform major obstetrical operations—and it is no part of the teacher to teach this. A further great difficulty is the way in which gynaecology has developed and the tendency in some centres for the surgeon to consider it a branch of general surgery and divorced from obstetrics. These subjects can never be divorced, and the schools which acquiesced in it have discovered their mistake and re-established the union. They are indivisible, and between them embrace the study of a group of organs in health and disease. A knowledge of general medicine is required as much as that of general surgery, and the obstetrician and gynaecologist must be trained to apply the appropriate treatment, whether in other regions it would be considered as part of general medicine, general surgery, radiology, or any other branch. No one can be a gynaecologist who has not the obstetrical knowledge of the physiological changes in these organs; no

one can be an obstetrician who has not the gynaecological knowledge of the accidents and disease to which they are heir.

The Aim of the Teacher of Obstetrics and Gynaecology

All teachers have a common responsibility to turn out a student with an all-round well-balanced knowledge of the rudiments of his profession, and the special responsibility to give him an adequate knowledge of the teacher's own branch. Teaching facilities and hospital accommodation in obstetrics and gynaecology have lagged far behind those of general medicine and surgery, and it is only in recent years that a demand has been made that these should be adequate. In some schools the hospital accommodation is still deficient, and the student's certificates of attendance must be filled in with a good deal of imagination. This deficiency, however, is gradually being overcome, and the facilities for teaching clinical obstetrics have greatly improved in the last few years.

The aim of a teacher of obstetrics and gynaecology should be to teach the anatomy, physiology, and pathology of these organs and to emphasize the fact that normal pregnancy, labour, and the puerperium are physiological processes; to teach the student to apply his medical and surgical knowledge to conditions found in pregnancy and the puerperium, to recognize abnormalities in the physiology of pregnancy, labour, and the puerperium, and to apply treatment to the simpler cases. The student should understand, however, that the amount which can be taught him is limited and that this cannot include operative obstetrics.

As most gynaecological ailments date from a confinement or miscarriage, it is essential that this fact be taught along with obstetrics. Only in this way can the student realize the remote effects of bad midwifery, which must be taken into consideration when deciding upon any gynaecological operation. The teaching of operative gynaecology is not part of a student's course.

Systematic Lectures

No doubt in the past too much emphasis was laid on systematic lectures and didactic teaching, and the students were not left sufficiently to ferret out facts for themselves and so develop the most important gift of the medical practitioner—that of observation. But the pendulum has swung too far when it is suggested that systematic lectures should be abolished. In obstetrics systematic lectures are essential. Unless the student has a sound knowledge of anatomy and physiology and of the mechanism of labour he can never understand what is then happening and so be able to recognize when the normal passes to the abnormal.

Clinical Work

The General Medical Council requires that six months shall be devoted to clinical obstetrics, gynaecology, and paediatrics, and that most emphasis shall be laid upon obstetrics. In different schools there must be different methods—depending upon the accommodation. In some a continuous period of six months is allotted to this subject, while in others it is divided into two periods of three months. I have had experience of both, and there is no question that a continuous period is much superior, because the student then realizes the interrelation of these subjects. In this way he recognizes that he deals with the same group of organs and often the same patient in

the obstetrical and gynaecological departments, while in the paediatric department he continues a study begun in the labour ward.

Residence in a Maternity Hospital

The General Medical Council regulations require that each student shall live in a maternity hospital for two months, and this is the most valuable experience in his career. He is living in a midwifery atmosphere, hears cases discussed by the residents, sees his cases night or day, and is not hurried from one department to another, with the consequent switching of his mind from subject to subject, as he is in the other parts of his course. During this time he must conduct personally twenty cases. This unfortunately tends to overestimate in the student's mind the importance of this part of labour, and the teacher must be ever vigilant to counteract the impression that the moment of birth is the only, or indeed the most important, part of obstetrics. Frequent attendance at the ante-natal clinic should be insisted upon. Here the student must learn abdominal palpation; to recognize contraction of the pelvis, especially in its minor degrees; to study the patient's general health, and to give advice on diet and general rules of life; to realize the importance of regular examination of the urine and of taking the blood pressure. His labour cases should, if possible, be attended equally in the wards and in the patients' own homes. The student must realize that labour starts with the first uterine contraction and that the obstetrician's knowledge and skill are called for more frequently before than when the child is actually coming over the perineum.

In the two-months residence it is impossible for him to attend the same cases in the ante-natal department and in the labour wards, but he should see his case as soon as the patient is admitted to hospital, and he should be allowed to examine her along with the house-surgeon. From then until she is delivered the student should pay her frequent visits and be taught to recognize normal from abnormal contractions, advancement, termination, and the condition of the patient. Only in this way will he learn that the use of forceps is not decided merely by the number of hours in labour and the desire of the patient and friends for its termination. In the conduct of the case he is taught scrupulous asepsis—preparation of the hands, the wearing of gown, gloves, and mask—and, as labour may last some hours, that his hands will not be aseptic at the end of this period simply because they were so at the beginning. In the puerperium he should pay daily visits and be taught to observe the progress of involution, signs of abnormality in the patient, state of the breasts, and progress of the baby. It is a wonderful opportunity to instil into him the necessity of observation. With all this he must keep careful notes. In many schools he is given a book in which he records the progress of each case from admission to discharge from hospital, and this book must be inspected before he receives his certificate of attendance.

Domiciliary Practice

This is a very valuable part of the student's training, as it is the only point at which he comes in contact with patients in their own homes and is left dependent upon his own powers of observation. The ideal training is for the student to spend one month attending cases in hospital and the other month on the district—still living in the hospital, taking in ward classes and ante-natal clinics and seeing all the abnormal cases brought into hospital, but attending the second ten of his confinements

in the patients' homes with the nursing staff, and paying regular daily visits by himself during the puerperium.

In his first ten deliveries attended in the hospital labour wards he has learnt to obtain and maintain scrupulous asepsis. With everything ready to hand in an up-to-date hospital this is relatively easy. The remaining ten cases must be attended with an equally rigid asepsis but in much more difficult surroundings. With more thought and trouble the same degree of asepsis can be obtained, but the student has to realize what are the essentials on which he must concentrate. To the student the chief advantage of the district cases is the daily attendance during the puerperium. These visits should be made by the student alone, and he should be encouraged to record daily all the essential points—temperature, pulse, lochia, involution, sleep, bowels, breasts, baby, etc.—and to report to a senior officer any divergence from the normal. This will develop his powers of observation and give him his first experience of responsibility. Moreover, by bringing him into contact with patients and their families in their own homes he will get his first lesson in one of the most valuable and difficult arts—the tactful handling of patients.

Post-natal Examination

In some schools there is a separate post-natal department, in others the patients come to the gynaecological department. Whichever method is adopted the student has instilled into his mind the large percentage of gynaecological complaints dependent upon obstetrics and how many of them could have been avoided. Also, he realizes that his responsibility as an obstetrician begins with conception and ends only when the patient completes the puerperium with organs as nearly as possible returned to the normal.

Gynaecology

As gynaecology cannot be divorced from obstetrics, so the teaching cannot be separated, although in this article I am laying more emphasis on obstetrics. The teaching of clinical gynaecology is much easier than obstetrics. Like medicine and surgery, the patients come to out-patient departments at regular hours and are admitted to wards and operated upon on regular days. Classes, therefore, can be organized in out-patient departments, wards, and theatres. There is, however, one important barrier to teaching. Speaking generally, a medical or surgical case can be examined by a considerable number of people, and, moreover, if the diagnosis is in doubt can be examined time after time. Not so a gynaecological case. The number of examinations made on each is limited, and the practitioner must be taught that one physical examination must suffice. This means that the history of the case must be taken very carefully and each point considered in relation to the others, so that the gynaecologist must have in mind what conditions could produce these symptoms in a woman of that age and history. In other words, his physical examination must be a differential diagnosis between the possible causes. Without this careful digestion of the history physical signs are of little value. It is therefore of prime importance that the student should have beds allotted to him, should take careful notes of each patient, and should be taught to find the possible diagnosis before an examination is made.

My own practice is to hold my ward class in the anaesthetic room with the patient under avertin. This allows the whole class to make a physical examination and to feel the organs with more exactness than in the

out-patient department without anaesthesia. After forming a tentative diagnosis from a discussion of the notes, and a definite one after the physical examination, I like them to watch the operation, for two reasons. First, it allows them to observe the organs which they have just felt; and, secondly, they see whether the diagnosis made in the anaesthetic room is confirmed or disproved and, if it be the latter, where we have gone wrong. Out-patient attendance is valuable, especially for senior students who have learnt to make examinations on patients under an anaesthetic. More examinations can be made here, and many of the conditions treated without admission to the wards are just the cases which fall to the care of the general practitioner.

During the whole course of gynaecology emphasis must be placed upon the interrelationship of obstetrics and gynaecology, especially on the fact that so many of the

conditions found in the gynaecological department date from a confinement or miscarriage and that many of these could have been avoided.

If it is possible to arrange that one month of the six is spent in the children's department, especially when this contains beds for infants, the student will gain immensely in interest and knowledge. He will be taught to consider the child in the ante-natal department, the labour ward, the maternal cot, the babies ward, and, finally, the children's ward—a continuous picture of this ever-changing subject. He will realize, also, that an obstetrician's duty is not merely to produce a living child, but that both mother and child must be left at the end of the puerperium in a perfectly healthy condition—the one to take her full place in life unhampered by physical disability, the other to grow into a healthy citizen, fit to hand on our glorious heritage.

THE PROFESSION OF MEDICINE

Following the plan first adopted nearly fifty years ago, we preface the main contents of the Educational Number of the *British Medical Journal* with some remarks intended to help those who think of entering the profession of medicine in Great Britain or Ireland. The prospective student usually asks his family doctor about these matters, and he in turn expects some guidance from his weekly journal.

REVISION OF CURRICULUM

The revised medical curriculum which has been under consideration for the last few years came into force on November 1, 1938. There has been common agreement that it is undesirable to lengthen the five years' medical course, but it is now recognized that this course should be regarded as beginning at the time when the study of human anatomy and physiology is entered upon, and that this should be at approximately the age of 18 years—rather later than was permitted under the former regulations. It is held, further, that a higher standard of general education than the present minimum should be demanded of those entering upon this course; that the requirements as to knowledge of the basic sciences of physics, chemistry, and biology should be modified and extended; that instruction in psychology, genetics, and methods of clinical examination should be introduced into the first two years of the curriculum; that the course should be regarded as a whole, with greater co-operation among the teachers of the several subjects, and not split into segregated departments; and that, throughout, the preventive and psychological aspects of medicine, the living human personality in health, the sociological duties required from doctors, should receive more attention than has hitherto been common.

The new resolutions and recommendations of the General Medical Council are based upon these principles. Students should familiarize themselves with the changes which become operative before their period of study is completed. Moreover, parents and students should have in mind that the pre-registration requirements bear upon the course of study in school between the ages of 16 and 18 years. It must be remembered that the powers of the General Medical Council are limited, and that quite as much depends upon the action of licensing bodies and medical school authorities as upon the Council. Indeed it may be said that, whatever regulations and minimum

requirements are laid down, and however admirable are the arrangements set out in the prospectus of a university or teaching body, success depends upon the ability and inspiration of the teacher and an adequate response on the part of the student. There is little doubt that in most schools both the conditions of entry and the requirements of the course will be tightened or made somewhat more stringent under the new procedure.

FINGER-POSTS

The first aim of the Educational Number is to outline the steps that must be taken in order to become a registered medical practitioner. The second is to help those who, having already decided to study medicine, are uncertain about the line of work for which they are best suited. In this introductory article we touch upon some aspects of study and practice, and direct attention to a few points that might not occur to anyone without experience of the medical life. If many sentences have a familiar ring to the medical reader it must be remembered that they are addressed each year to a new audience in search of facts and sign-posts. When the information and guidance is sound and clearly put it may be repeated from year to year without apology.

The classified sections of the Educational Number give an account of the course of training required of students, the places where it can be obtained, and the bodies which test the knowledge gained and confer degrees or diplomas entitling successful candidates to become legally qualified medical practitioners. Sections are included also on post-graduate study, on the higher qualifications, and on most of the varied spheres of work, private or official, which are open to registered medical men and women at home and abroad. The details given are founded on official information, and arranged along the customary lines.

The President of the Royal College of Surgeons of England, discussing "The Entrance to Medicine" a few weeks ago, reminded his audience that although the curriculum to-day is very different from what it was forty-five years ago the fundamental principles of medical education are the same.

"Now as then there are certain things that must be known, some that ought to be known, and others with which the student should have some acquaintance if only to satisfy examiners. But that is not all, for in addition to acquiring a