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## ORIGINAL ARTICLES.

### TEACHING METHODS IN GYNECOLOGY AND OBSTETRICS.

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In obstetrics and gynecology, as in most other departments of medicine, no present-day system of teaching is complete which does not include practical as well as didactic instruction. Text-book and lecture must be supplemented by demonstration and practice. The former are essential to a comprehensive and systematic conception of facts and principles; the latter, to a working knowledge of them.

So far as possible it is best that both plans of instruction go hand in hand in parallel courses. It is a distinct gain for the student if text-book and *viva voce* teaching can constantly be elucidated and enforced by objective illustration. Facts and methods are more easily learned and more firmly fixed in mind by observation. Every physician knows how much greater interest a subject acquires when studied with a case in hand. So it is in equal degree with the medical student. The pursuit of knowledge is no longer drudgery when the teaching is by object lessons. The practical work is most instructive when it runs *pari passu* with the didactic course.

#### THE LECTURE.

The cramming process of the medical lecture room to the exclusion of other methods has long since passed. Yet the didactic lecture has its uses. It may be made especially helpful to the beginner who, perhaps, from lack of training, is ill able to analyze his subject for himself, and to whom the text-book too often presents little more than a confused mass of facts. Salient points are made prominent and a broad and well systematized grasp of the subject is more readily assured than by dependence on books alone. Yet lecture and text-book must be combined. The lecturer is fortunate who can place in the hands of his class his own lectures in book form, or at least a syllabus of them. Where this is not possible, a well-ordered syllabus of each lecture, arranged in tabular form with reference to

proper subordination of topics, and written upon the blackboard, is a material help. With such aids the student not only more readily masters the subject but he gets methodical habits of thinking and working and learns how to grapple with new questions.

The teaching value of the lecture is greatly enhanced by demonstrative methods. Drawings, photographs, charts, models, and especially demonstrations with the aid of phantoms, and, when possible, with clinical material, are extremely useful for supplementing, elucidating and indelibly fixing what is taught. They help immensely in fastening the attention of the listener.

Objective illustration is invaluable not only as an easier road to knowledge, but because it imparts the kind of knowledge the gynecic surgeon most needs to know. It familiarizes him with the actual facts of practice. Demonstrations, the exhibition of instruments, models of dry and of wet preparations, are an essential part of the work in lecture and recitation.

The obstetric and gynecologic department of the medical college should be well equipped with material for illustration, such as dried preparations of normal and deformed pelves, or models of the same, wet specimens of the pelvic viscera, gravid uteri with the ovums *in situ* and representing the various stages of development, embryos, fetuses, placentas and detached ovums in the different months of growth, together with specimens of all pathologic conditions of genital organs and foetal structures.

#### THE QUIZ.

The student's mental pabulum needs not only to be well prepared and properly served, it must be digested. To make sure of this is pre-eminently the work of the quiz. A mere catechism, which calls only for the memorizing of facts, is by no means all that must be aimed at. A well directed quiz stimulates to think, to reason; it helps the student to organize his knowledge to digest and assimilate what he has learned. Even more—part of the pupil's knowledge he may be taught to build for himself out of the material he already has.

An expert quiz master keeps attention alert; class as well as teacher are kept at work. One

man's question is every man's question and all work together. In both didactic and clinical teaching systematic quizzing is of the greatest value.

#### CONFERENCES.

In the conferences a hypothetical case is submitted a week in advance for discussion by the senior class. A part are appointed to open the debate, and all prepare themselves to speak upon the salient features of the case, especially upon questions of diagnosis and treatment. The reference library of the college, in addition to the text-book, affords means for collecting material. Toward the close of the hour the views presented are commented upon and criticised by the instructor. Properly conducted, the value of the conference is self-evident.

#### PRACTICAL TRAINING.

The most important advance in modern medical teaching lies in the greater attention paid to practical training. In none of the arts is experience more essential to success than in medicine, and especially is this true in obstetrics and gynecology. A man may be learned in the science, yet from lack of practical bent may fail in the art.

#### MANIKIN TEACHING IN OBSTETRICS.

Eminently essential to a working knowledge of obstetrics is a course of manikin and bedside teaching. Here the student is schooled in the everyday experiences of practice. He gets both manual and mental training.

The more important mechanical phenomena of labor, and most of the technical methods employed in obstetric procedures are taught on the phantom. Maternal manikins are provided, each in a room large enough for a section of eight or ten students. Fœtal cadavers, preserved as for dissection and kept in alcohol, are used instead of fœtal manikins. Fœtal skulls, dried pelvis, rubber uteri, pelvimeters, and other obstetric instruments and appliances for teaching are provided. The walls are hung with drawings, charts, and with a full schedule of the manikin work. The teaching is done by a special staff of five instructors. The student is drilled in diagnostic methods, and in the various obstetric manœuvres.

The fœtal skull is placed in the dried pelvis in the different positions under cover of a sheet, and the student is required to make the diagnosis of position by the touch. Then manikin and fœtal cadaver are substituted for pelvis and skull, and he learns to distinguish the presentations and positions of the fœtus, both by abdominal and vaginal examination.

He is next practiced in the use of forceps, in the operation of version, in breech extraction and in various other obstetric procedures. He is required to do for himself, being constantly quizzed by the instructor, and his manipulations criticised and corrected.

#### OBSTETRIC WARD-WORK.

After becoming well grounded in the manikin work, the sections are admitted to the lying-in wards. Here, too, as far as possible, a definite plan is followed. The schedule begins with the signs of pregnancy. The mammary, the abdominal and, in some measure, the vaginal signs are familiarized by actual observation and experience. The student inspects, palpates and auscultates for himself, in accordance with a definitely prescribed plan, and is called upon to tell what he observes. He studies the mammary changes in their varying phases, becomes fairly proficient in the diagnosis of pregnancy by the abdominal and to some extent by the vaginal signs, in determining the presentation and position of the fœtus by the external examination, and in pelvimetry. The phenomena and management of the puerperium, mensuration of the fœtus and the care of the new-born, are studied in like manner. A section of the class is present at labors; the course and conduct of childbirth are demonstrated, and so far as practicable students are permitted to participate in its management.

#### OUT-PATIENT OBSTETRIC PRACTICE.

The hospital work is supplemented in the out-patient service in which, under direction of a special staff, women are attended in confinement at their own homes by members of the graduating class. This division of the teaching force numbers seven. The student, under guidance of his instructors, makes the ante-partial examination, conducts the labor and follows the course of the case through the puerperal period. On dismissal of the patient he fills out a printed form of case-record which is filed with the chief of clinic. This latter requirement not only enforces greater attention to scientific detail in practice, but it helps to form the habit of accurate observation and of keeping minute and orderly clinical records.

#### GYNECOLOGIC DIAGNOSIS.

Advanced students in sections of four are drilled in the diagnostics of gynecology by actual practice in the dispensary. Two clinics are conducted daily in adjoining rooms. Each room is equipped with an examining table, a cabinet of

instruments, a sterilizer and other requirements for the work. The first stage of the clinical course is history taking. One student in each clinic keeps the case-records, the other learns diagnostic methods. Before completing the practical course he conducts examinations for himself, his findings being discussed and revised by the adjunct gynecologist on duty. An additional and more elaborate practical course in diagnosis is carried out by the chief of clinic following a prearranged order of topics.

This part of the teaching is still further supplemented in the operating theater. At operation demonstrable conditions are constantly utilized for the instruction of the class. In suitable cases a small section of students, after preparing their hands and putting on operating gowns and rubber gloves, make digital examinations. A good number of the class show a gratifying degree of diagnostic ability by the time they have completed the curriculum.

#### GYNECOLOGIC OPERATIONS ON THE CADAVER.

Formerly a certain amount of plastic work was done by the student with the aid of phantoms, some made of canton flannel, others of glue jelly. This, for the most part, has been replaced by a course in operative gynecology upon the cadaver, which includes the principal gynecologic operations upon the pelvic viscera and also the incisive operations of obstetric surgery.

#### SURGICAL CLINICS IN GYNECOLOGY.

In the operating theater of the hospital the essential steps of operations are demonstrated as far as possible, and technical methods explained and illustrated. Members of the class in small sections and with the necessary precautions are admitted to the arena where the details of the work may be followed more closely. Another section watch the giving of the anesthetic under the instruction of the lecturer on anesthesia.

Students also visit the wards and may observe the after-care and treatment of patients whose operations they have witnessed. They are enabled to keep complete records of cases which they have studied in the dispensary service, have followed to the operating room and watched throughout their convalescence.

Such, in brief, is the system of teaching at the Long Island College Hospital. It is carried out by a corps of little more than twenty instructors. Students graduate not only with a more fully rounded knowledge of the subject, but with a practical fitness in striking contrast with the results of earlier days.