

THE PRACTICAL TEACHING OF OBSTETRICS IN THE UNITED STATES.

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THE attempt will be made in this paper to show to what extent practical obstetrics is taught the students attending the medical schools in this country.

In 1874, the College of Physicians and Surgeons of Baltimore, aided by a generous appropriation from the State of Maryland, established a lying-in hospital for indigent women in that city. It is believed that this is the first institution in the United States in which a successful attempt was made to found a maternity hospital service in connection with a medical college and offer to all the students in attendance the great advantage of practical teaching and clinical demonstration in the important branch of obstetrics. Since the opening of this hospital seventeen hundred women have been confined in the institution, a large majority of whom were used for purposes of clinical demonstration. There is likewise an outdoor obstetric service connected with this hospital, which is also used for the instruction of students.

The lying-in department of the Cincinnati Hospital has furnished clinical instruction in obstetrics to the students of the Miami Medical College for about fifteen years.

The Buffalo Maternity Hospital was established in 1886. It is directly connected with the medical department of Niagara University, and all the patients are used for the clinical instruction of the students in this school.

The University of Maryland established a free lying-in hospital in 1887. The cases in the hospital, as well as those in a well-organized out-door service, are all utilized for the instruction of the students in the medical department of the University.

The Baltimore Medical College established the Maryland General Lying-in Hospital for the clinical instruction of its students in 1888. All the cases of labor occurring in the hospital are utilized for this purpose.

The University of Pennsylvania established a maternity hospital in connection with its medical department about two years ago. Prof. Hirst has given an interesting account of the methods of instruction pursued in that institution in a brief paper recently presented to the Philadelphia Obstetrical Society.¹

The Boston Lying-in Hospital has a large out-patient service, which furnishes opportunities for clinical instruction in obstetrics to the students of Harvard Medical School. The College of Physicians and Surgeons of New York, Jefferson Medical College, University of Michigan, Medical College of Ohio, Cincinnati College of Medicine and Surgery, Medico-Chirurgical College of Philadelphia, Woman's Medical College of Philadelphia, Detroit College of Medicine, and doubtless many other medical schools have established, or are about to establish, maternity hospitals, or out-door obstetric services, for the purpose of giving their students facilities for acquiring a practical knowledge of the obstetric art. When we look back only a few years we will see already considerable advance in this direction, and who can doubt that the development will go on even more rapidly in the near future?

In all the institutions above mentioned careful antiseptic precautions are enforced, and, as a consequence, the mortality from septic infection (puerperal fever, so called), which formerly made delivery in a maternity hospital so dangerous to the mother, has been practically wiped out. To such an extent has this taken place that I do not hesitate to express the conviction that a woman has a better chance for her own life and that of her offspring in a properly-conducted maternity hospital than in her own home, however luxurious in its appointments.

As the institution under my charge was, I believe, the first in this country to be made a practical school of obstetrics for medical students, and as it has always been used exclusively for this purpose, I venture to take up some time in describing the method of management followed there.

¹ Archives of Gynecology and Pediatrics, July, 1890.

When a woman applies for admission she is first interrogated as to her history, to ascertain the probable existence of pregnancy. After a record is made of the facts thus ascertained, she is given a bath and is subjected to a physical examination. If sufficiently advanced in pregnancy she is at once admitted; otherwise she is given a permit which entitles her to enter on a certain date, or earlier if symptoms of labor appear. During her stay in the hospital she receives a bath twice a week, and a diagnosis of the presentation of the child is made by palpation. The fetal heart-beats are also counted and a record made of their number. The pelvis is measured externally by means of the pelvimeter. Strict antiseptic precautions are maintained during all these manipulations.

When labor begins, the woman is given a full bath, or, in the event of its considerable advancement or too rapid progress, she is washed with soap and water from the armpits to the knees, and then laved with an antiseptic solution of mercuric chloride, 1 to 1000. A clean night-gown is put on her, and a vaginal douche of mercuric chloride solution, 1 to 4000, is administered by the nurse, who has first carefully cleansed her finger-nails with a nail-brush, hot water, and soap, followed by a 1 to 1000 bichloride solution. As few examinations are made as are consistent with a knowledge of the progress of the case.

When the os is fully dilated, and the membranes ruptured, the patient is brought to the delivery-bed, and remains thereon until delivered. The membranes are not intentionally ruptured until the bag of waters has descended to near the vulva, unless in exceptional instances that require active measures. After delivery a vaginal douche, and, if an operation has been performed, or the hand has been introduced into the uterus, an intra-uterine douche (bichloride, 1 to 5000) is given. The cord is not tied until pulsation has ceased. The placenta, unless expelled naturally within ten or fifteen minutes, is delivered by Credé's method. After the child has received the necessary attention, the mother is cleansed, any rents in the vagina or perineum dusted with iodoform, or deep tears of the perineum stitched up, the woman removed to bed, and an antiseptic vulvar pad applied.

The child is carefully examined after ligature and separation of the cord, weighed, measured, washed, and the stump of the cord dressed with iodoform and absorbent cotton. A one per cent.

solution of silver nitrate is instilled into the eyes; that has proven an efficient prophylactic against ophthalmia neonatorum.

No antiseptic douches are used afterward, unless the temperature should rise to or above 101° , or the lochia become offensive; in these cases an intra-uterine douche of bichloride, 1 to 5000, is given by means of the uterine catheter devised by Dr. W. S. Gardner, and described in the *Transactions* of this Association for last year.¹

The diet is varied and generous from the first.

As the students of the college matriculate, their names with their local addresses are entered on a register kept by the resident-physician of the Maternité. When a patient is taken in labor, the physician notifies, through special messengers furnished by the District Telegraph Company, a class of ten students taken in regular sequence from the register. As soon as the students arrive at the hospital a digital examination is made. Each member of the class is expected to attempt a diagnosis of presentation and position, the professor or demonstrator of obstetrics being present to supervise the examination and correct errors of method. Strict antisepsis is exacted of everyone who comes into the delivery-room, and no person is allowed to touch the patient until he has carefully disinfected himself. Students are not called to the Maternité while they are dissecting, or doing practical pathological work.

At least two examinations are made by each student summoned to the case: one in the first stage, and the second when the os is fully dilated and the membranes ruptured. The students are constantly interrogated during these examinations, to test their knowledge and appreciation of the conditions present. When the head descends to the perineum, the patient is moved to the lower end of the delivery-bed, and the evolution of the head and shoulders exposed to the eye. The methods of supporting the perineum and delivering the head are also shown. Considerable pains are taken to show the correct way of tying and dressing the cord, and the students themselves assist in recording the phenomena of the labor, and the weight and measurements of the child. Opportunity is often given to demonstrate the methods for resuscitating asphyxiated children. During the past year several infants, apparently dead when born, have been resuscitated by active efforts, in two cases continuing for over half an hour.

¹ Vol. ii. p. 326.

The necessity of rigid antisepsis is strongly impressed upon all the students, and I venture to claim, as a result of its strict enforcement, that during the last three years not a single death from any septic disease has occurred in 377 deliveries.

The cases in the Maternité are sufficiently numerous to allow every student to be present and assist at two or three deliveries during each session. Attendance upon these demonstrations is a necessary condition for graduation. The resident-physician is required to keep a record of those students who fail to attend a case when summoned, and report the delinquents to the professor of obstetrics. It very rarely happens, however, that any student intentionally absents himself from the demonstrations.

In addition to the advantages offered to the students in the manner above pointed out, "touch courses" are given by the demonstrator of obstetrics to the students divided into small classes. These courses are also obligatory upon all matriculates, and are very popular.

A part of the work of the Maryland Maternité, which I regard as not less important than that of practical teaching of students, is the training of intelligent nurses in the modern methods of management of confinement cases. In the Maternité efforts are made to get young and intelligent women to take up this work. They are required to remain at least six months, during which time they are expected to study some work on practical nursing, and also such portions of a text-book of obstetrics as relates to the management of normal labor. Antisepsis is enjoined upon them as if it were an article of religious faith.

After their term of service has expired, the nurses are subjected to a rigid examination covering the entire management of a case of labor, from the beginning of the pains to the day of discharge of the patient. Here, also, special insistence is placed upon the vital importance of thorough disinfection.

The facts given in this paper show that, at the present day, the American student has considerable opportunity for the acquirement of a practical knowledge of obstetrics. The facilities may not be so great as in some European clinics, but they are daily growing, and will soon render it unnecessary for the earnest student to seek practical instruction in this branch in other countries.

DISCUSSION.

DR. A. H. WRIGHT, of Toronto.—Mr. President and Gentlemen: It has been suggested by your secretary that I say a few words upon this subject. I have very much pleasure in rising to testify to my appreciation of the methods spoken of by Dr. Rohé. I have always thought that it was, perhaps, the weakest point of our system of medical education that we have not been able to give our students sufficient clinical instruction in obstetrics. The advantages of a place like Dublin, and certain cities on the Continent, are great. A worthy and industrious student has any and every opportunity. I do not think it possible on this continent to have that condition, nor would I like to suggest that in this country we should endeavor to compel women to submit themselves to unrestricted examinations by students. We must consider the dangers that are attached to these examinations. We have in Canadian schools rules which compel all students to have seen six cases of obstetrics. For some years it was found in Toronto that the mortality rates were much too high. We then introduced antiseptic methods, carried out very much after the plan described by Dr. Rohé. Still the mortality continued high. Then we had to stop the indiscriminate examination of women by students. Our rule now is that one student is allowed to examine the patient—that is, make a vaginal examination; but we encourage all students to examine by abdominal palpation. This latter method helps us materially in the direction of asepsis in obstetrics. I think we have learned a great deal from modern surgery, and our advances toward aseptic midwifery are chiefly due to our proper appreciation of the grand work done by Sir Joseph Lister and others in the same line. Our resident assistant has charge of confinements, except in difficult cases. When I am present I sometimes ask three or four students to examine the patients. This is the largest number we allow. There is one thing I insist upon very strongly: that is, that no student or assistant shall make any sort of examination after the child is born, unless there is absolute necessity. That is the time when I consider there is the greatest danger, on account of recent tears, with their numerous open-mouthed vessels. We now come to a point connected with douches. Here I think, perhaps, I will disagree slightly with the teachings of some medical men in America. I refer especially to a man in whose teachings I have always taken a great deal of interest, Dr. Price. I do not use any douche in an ordinary case of labor, before or after, either in my hos-

pital or private practice. I do not use it before, because I consider it does a certain amount of harm, and I do not know that it does any good. It might remove the germs that may be in the vagina, but I have not found that such organisms do any harm. After labor I think it frequently does harm, and that it is at least unnecessary. I have found that the great danger is in the finger-tips. But to come back to the general subject of our methods in the lying-in room for the practical instruction of students, I hope that we will soon be able, with our improved plans, and a better discipline among our skilled assistants, to give them more manual work to do. I may say, however, that I have a high regard for my hospital patients, and would not like to have them subjected to any dangers I would object to in my own family. Of course, we have to depart somewhat from our rules as to privacy in our ordinary private practice. I have found that the women have been willing, as a rule, to submit to our ordinary hospital rules; but they have rights, and if I find any poor married woman not able to be treated outside, who is decidedly opposed to having students examine her, I respect her scruples. We must, however, look to the fact that we are training young men to go into the country to practise midwifery, and we should give all possible facilities. It is easy to tell a man to use soap and water, but difficult to make him use them effectually. I think students are like children, and believe that the hardest thing to teach them is to keep clean. I may pass beyond the students, and say I think the hardest thing to teach general practitioners is to keep themselves clean. I must congratulate Dr. Rohé, and I wish his institution, and others carried out on the same plan, long-continued success.

DR. JOSEPH PRICE, of Philadelphia.—Dr. Rohé has done much to stimulate medical schools and philanthropic people controlling maternity hospitals to educate practically young physicians in some refinement in maternity work. As a rule, maternity work is the first thing a young physician has to do. It is his loaves and fishes, his office rent, and whole income. Just on this subject he is most deficient. Until the last few years all medical schools have done nothing in a practical way. It is curious what opposition we have had: again, most lamentable. For myself, as a director of two maternity hospitals, had I six daughters, I would wish those institutions practically to educate more men in obstetrics, that my daughters might have skilled obstetricians to take care of them in the perils of childbirth. The gentleman that has just taken his seat has talked beautifully on this subject, but seems to take a little ground against using some of this public material for educational purposes. I feel that every pauper in the

seeing the women in the premonitory symptoms. You have lots of things to tell them. They are a stubborn, ugly body to handle—as much so as a State legislature. They are permitted to give a vaginal douche only before the labor. I am not sure that it is wise practice to allow them to give a vaginal douche after the delivery of the placenta. Deaths occasionally occur among the patients attended by the graduates. In this last three years there has not been a single death. A thousand deliveries, in the dirtiest hovels in the world, and among the most destitute people, with a single death! Only one, the case of eclampsia in the hands of a graduate. A few years ago we occasionally had peritonitis and puerperal fever. Finally, a half dozen in all; I noticed they all occurred in tenement-houses—all of them. For two or three years it was so curious that when a man came to me and said he had such a case, I could pick out one of three or four houses in which it occurred. I have yet to see a case in a house without plumbing. I would like to see all public institutions use their material judiciously for educational purposes. We want more practical teaching and training in medical schools, and all hospitals thrown open for practical educational purposes. Then we will have more skilled obstetricians, physicians, and surgeons.

DR. WILLIAM WOTKYNs SEYMOUR, of Troy.—It is forty-five years since my father began his obstetrical training in this city, under the tutelage of Dr. Hodge. I think the system then followed in that school would be a good thing now for the medical schools of the United States to follow. At that time it was the custom of Dr. Warrington to instruct his students in the management of midwifery from the first; to construct a suitable bed, and to avoid all the nasty contrivances found in alleys and tenements. They were familiarized with the pelvis, the sutures, the positions of the head, the degrees of flexion and rotation, and all with the pelvis concealed from view. In this wise the student early learned, on the dry bones, to be sure, to determine by the relation of the head to the pelvic bones what the position and presentation was. I think all practitioners will agree that, apart from cleanliness, this is a fundamental necessity in the practice of midwifery. We devote any quantity of time to embryology, but when it comes to the instrumental and manual part of labor our practitioners, who have acquired large skill by thumb-rule practice, are very deficient. When a student pursued this course a few months, as Warrington carried it out, and then were assigned cases, they entered on the practice with far better ability than nearly any other students in the country. I do not mean to take exception to anything said by the previous gentlemen. I thoroughly approve of the stand they have taken. One thing might

be said about carrying examinations too far. To make them, a student should be essentially and surgically clean.

DR. PRICE.—I spoke clearly about instructing students in regard to examining the patients freely, provided they use soap and brush thoroughly, first, last, and all the while. As to instruction upon the manikin, that is a part I have nothing to do with. It belongs to the theoretical branch of the profession. In regard to familiarizing the student with presentation and position, I instruct him after delivery, when the child is in the hands of the nurse, to make an examination of the sutures and fontanelles, and play his examining finger over them, which gives him a mental picture or knowledge that will quickly instruct him in regard to diagnosticating position.

I have a habit, when travelling, to ask my friends among other things questions in regard to the mortality of maternity work. In Virginia, a physician told me he lost three cases in 1000, and had never given a douche. One case he thought was due to a ruptured uterus. It is curious how you can demonstrate the folly of chemical solutions in a clean class of patients. Here, in city life, where we suffer all sorts of vices, it is not so. I value in city life the use of chemical solutions more to save eyes than to save women. Out of 600 deliveries I have had only three cases of ophthalmia, in none of which had the mother been prepared for labor; not a single ophthalmia occurring in patients properly prepared or cleansed beforehand.

DR. W. W. POTTER, of Buffalo.—As a part of the history of the teaching of obstetrics in the United States, so interestingly and ably considered in this paper and the discussion thereon, it may be of interest for me to call attention to the fact that the first clinical teaching of obstetrics in this country occurred in Buffalo. In the winter of 1850, Prof. James P. White brought the senior class of the Buffalo Medical College to the bedside of a woman in labor, and permitted the members thereof, under his immediate supervision and instruction, to make occasionally during the progress of the labor digital examination of the parturient tract; he also taught palpation of the abdomen so far as it was then considered necessary with reference to the practice of obstetrics. These young candidates for the doctorate were further instructed in the art of obstetrical diagnosis with reference to the placental souffle and the fetal heart-sounds, so that altogether it was a most complete clinical demonstration for that period.

But there was created by the *innovation*, as it was then universally termed, a current of adverse criticism, directed at Dr. White, that finally developed into a raging storm of abuse. The daily prints took it up, and characterized the proceedings at the medical college, where,

in the janitor's room and attended by the janitor's wife, the woman was confined, as the most unheard-of and shocking outrage of propriety and common decency.

The storm grew to such proportions that Dr. White felt compelled, in sheer self-defence, to procure an indictment for libel of one of the then prominent physicians of Buffalo, in order that, upon the trial, he might show to the public just what had been done, why it had been done, and that it was purely scientific and proper. This was before the days of court stenographers, but Dr. White, at his own expense, employed two short-hand reporters who have faithfully preserved the record of this remarkable trial, which was one of the most stirring events of its time that Buffalo had ever seen.

Under the calm deliberation of a judicial tribunal all the facts were brought out, and, though the trial failed of convicting the indicted person, yet Dr. White's fair name was preserved, and he lived to enjoy the fruits of a well-earned reputation for more than thirty years thereafter; indeed, long before his death "demonstrative midwifery," as it was then universally termed, was one of the prides of his early teaching years, and he often referred to the exasperating troubles consequent upon the attempt to establish the clinical teaching of midwifery in the United States as the most important struggle of his life.

There is one other point connected with this history that ought not to be omitted, though it does not pertain to the clinical side of the case, but to its jurisprudence. At the trial able counsel was engaged on both sides, and the contest continued during four days. Care was taken to impress the public, the court, and the jury, as far as possible, that public opinion was against such a demonstration as Dr. White had been guilty of, and that all that had been written and said in condemnation thereof was in the interest of a healthy and moral public opinion and sentiment. The learned Judge who presided—Mullet, of Chautauqua County—during his charge swept all these considerations from the jury-box, in the following words: "Gentlemen, public opinion has not been deemed a very safe agent in the administration of justice since it profaned the Judgment-seat and insulted Heaven by the cry of 'Crucify Him! Crucify Him!!' Pilate, weak and time-serving, disobeyed the dictates of his own conscience and followed the popular outcry, which he mistook for public opinion; but the sacred history of that awful tragedy informs us that the chief-priests and elders persuaded the multitude."

Taken altogether, this case is one of the most unique and interesting connected with the history of medical teaching in this country, and though the chief actors in the scene have nearly all gone, it deserves

to be known and studied in the light of our present knowledge, as well as preserved in the memories of later generations; hence, my allusion to it at this time may not be out of place.

DR. ROHÉ, closing the discussion.—I would like to add a few words to what has been said. In the first place, speaking of frequent examinations, a class of ten students is summoned to every case in the Maryland Maternité: by the time each man has examined the patient twice, and the professor has also examined her twice, there are twenty-two examinations, which I think entirely sufficient in one case. With reference to the use of antiseptic injections, they are only given after labor when the condition of the patient calls for them. In regard to using vaginal injections before labor, all the febrile cases that have occurred in the Maryland Maternité have been such as were brought into the institution in labor, or where there was no opportunity to give the ante-partum douche. No grave cases have occurred, but some which have indicated that unless carefully managed they might produce trouble. These few cases have led me to believe that the douche before labor is of some use to the woman, and I believe with Dr. Price that it is valuable for the safety of the eyes of the offspring. I am greatly indebted to Dr. Potter for the interesting bit of history which he has just related.