SUPRAVAGINAL HYSTERECTOMY FOR IMPOSSIBLE LABOR, WITH INTRAPELVIC TREATMENT OF THE STUMP.

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II. Choice of the Operation.

Obstetric surgery is the natural outgrowth of the application of improvement in surgical methods and knowledge of antisepsis to obstetric practice. The result is seen in the saving of infant life and in the preservation, not only of the mother's life, but also of her health and vigor.

Difficult extraction of the fœtus by the use of forceps, with mutilation of the mother and subsequent death of the child, may be avoided by the application to obstetrics of modern surgery. The term Cæsarean section has become indefinite because improved methods of operation in some instances supersede the simple and ancient procedure commonly known as Cæsarean section. At the present day, in cases where natural birth is impossible by reason of disproportion in size between mother and child, the obstetrician has the choice of symphyseotomy, cœlio-hysterotomy, or cœlio-hysterectomy. In the last of these he must discriminate between cœlio-hysterectomy with the extrapelvic treatment of the stump, and cœlio-hysterectomy with the intrapelvic management of the stump.

The field of symphyseotomy, although undoubtedly a legitimate one, is limited not only by the degree of disproportion between mother and child, but also by the size and development of the soft portions of the birth-canal. Experience has shown that symphyseotomy with extraction of the child through a small and ill-developed vagina is attended with greater risk than delivery by abdominal incision. Cases in which the fœtus is in breech presentation are again less favorable for symphyseotomy than are presentations of the vertex. When, however, the degree of disproportion is but moderate and the birth-canal is fully developed, symphyseotomy will save the lives of many children with a minimum risk to the mother.

In selecting delivery by abdominal incision, the operator must choose first between cœlio-hysterotomy and cœlio-hysterectomy. By the former we understand incision of the uterus and extraction of the child, with suture of the uterus, leaving the patient capable of further procreation. By cœlio-hysterectomy is described the removal of the greater portion of the womb, rendering further childbearing impossible. In making this important choice, the wishes of the patient must be consulted. In women of good constitution and happily married few will be found who will not desire to retain their power of reproduction. On the other hand, in married women of feeble strength in circumstances of poverty the burden of childbearing may well be removed. In women illegitimately pregnant and belonging to the class of professional paupers, who are likely to be with their progeny a constant burden on the State, the continuance of reproduction is certainly to be avoided. Most of the latter class have little conception of the responsibilities of maternity, and even if asked to make a choice are incapable of doing so intelligently.

Between cœlio-hysterectomy with intra- and extrapelvic treatment of the stump the difference is great. Improvement in the technique of hysterectomy now enables us to remove the greater portion of the uterus with tubes and ovaries without excessive risk to the mother, and leaving her in a condition favorable for comfortable health. In view of these facts cœlio-hysterectomy with extrapelvic treatment of the

stump is rarely indicated. In cases in which the patient's condition is such that rapidity of operating is of vital importance it must be remembered that cœlio-hysterectomy with extrapelvic treatment of the stump is quickest. The simplicity of this procedure will also render it available for those who have had little experience in obstetric surgery. These advantages are more than counterbalanced by risks of infection owing to the position of the stump, by imperfect control of hemorrhage in many cases, and by tardy convalescence with subsequent interference with the functions of the bladder by the remnant of the uterus left behind. In cases in which abdominal delivery is necessary and future pregnancy is to be avoided cœlio-hysterectomy with intrapelvic treatment of the stump is at present the most desirable form of operation. To illustrate the propositions advanced the following cases are cited:

Case I. Reported in full before the Academy of Medicine, New York, Section on Obstetrics, April 25, 1895.—The patient is a young colored woman, small and ill-developed, whose height is four feet eight inches, and whose pelvic measurements are as follows:

Iliac spines	23 cm.
" crests	24 "
External conjugate	17 "
True "	7¾ "
Right diagonal	21 "
Left "	20 "
Trochanters	29 "

As disproportion between the head and the pelvis evidently existed labor was induced. After the patient had been in labor twenty-seven hours under good care in the Maternity Pavilion of the Philadelphia Hospital, it was determined to deliver her by abdominal section, because the head had entirely failed to enter the brim of the pelvis. The small size and ill-developed condition of her birth-canal rendered the indications for symphyseotomy not of the most favorable. The patient was without friends, with a family history of tubercular infection, and it was accordingly decided, in view of her illegitimate pregnancy, to make subsequent impregnation impossible. Cœlio-hysterectomy was accordingly performed, the stump being ligated and dropped. With the exception of rapid pulse during the first week of the puerperal period, the mother's recovery was uneventful. The patient nursed her own child, and assisted in nourishing another. She is at present (ten months after the operation) in good health and still nursing her infant.

Case II.—M. H., aged twenty-three years, was sent to the Jefferson Maternity, May 8, 1895, by Dr. Jennings, of Merchantville, N. J., who measured her, and informed her that her labor would very probably require an operation. Her family history was that of tuberculosis and heart-disease. With the exception of rheumatism, the patient's health had been good. She had a miscarriage at seven months. She was in labor at this time for three days, and was finally delivered, the child dying soon afterward. She was then informed that further pregnancies would be exceedingly dangerous. Upon admission the patient was fairly nourished. An examination of her urine showed that her excretions were fairly well performed. The head of the fœtus was found freely

movable above the brim of the pelvis, the back was to the right, the limbs toward the left and front. The fœtal heart-sounds and position of the fœtus indicated a second position, the occiput pointing posteriorly. The pelvic measurements were:

Iliac spines	23½ cm.
" crests	26 "
Right diagonal	20 "
Left "	20.5 "
Trochanters	30 "
External conjugate	17 "
Vaginal measurement of the internal conjugate given	10 "

The patient had completed nine months' gestation and was within a few days of term. In view of the evident disproportion between mother and child it was thought best to induce labor with the hope that the patient could be delivered by forceps. Bougies were employed under antiseptic precautions, and severe labor-pains with slow dilatation followed. When dilatation became complete the pains were very strong. The head, however, failed entirely to enter the pelvic brim. The resident physician, Dr. L. F. Hess, wisely refrained from rupturing the membranes, and to his good judgment is largely owing the life of the child. In view of the failure of induced labor to bring the head of the child into the brim of the pelvis, I decided to deliver the patient by abdominal section. She was accordingly etherized, the abdomen opened, the uterus incised, and the child and placenta rapidly delivered. The hemorrhage was controlled by the hands of my assistant, Dr. Coles. The child was slightly asphyxiated, but readily resuscitated by Dr. Wells. The patient was then placed in the Trendelenburg posture. A hysterectomy-clamp was applied across the uterus at the lower end of the incision into the womb, and the ovarian and uterine arteries and the broad ligaments were ligated at leisure. The uterus was then resected at the junction of the upper and lower uterine segments. The stump was closed by bringing together the peritoneal flaps and including the subperitoneal tissue with continuous silk sutures. The pelvis was sponged clean, the stump dropped, and the abdomen closed without drainage. The patient's convalescence was uninterrupted. Her temperature was but on one occasion above 100°, and then for a short time at 100.5°. Lactation was performed and the child properly nourished. At the present time the mother is in good health. The stump of the uterus is freely movable and she is still nursing her child. Examination of the fœtus showed the presence of a rhachitic skull, whose diameters were as follows:

Maximum	14.5 cm.
Occipito-frontal	14 "
" -mental	13.5 "
Suboccipital bregmatic	12 "
Bitemporal	8.5 "
Bimastoid	9 "
Biparietal	10½ "
Trachelo-bregmatic	12 "
Circumference occipito-frontal	33 "
" maximum	34 "
Bisacromial measurement of trunk	13 "
Length	47 "
Weight	4 lbs. 14 oz.

The child has progressed favorably, having gained in weight, and when recently examined mother and child were in good condition.

Case III.—The patient, a colored girl, aged about twenty years, applied during November, 1895, to the Polyclinic Hospital for attendance in confinement. Her pelvic measurements were as follows:

Anterior superior spines	25 cm.
Crests	26 "
Trochanters	29 "
Right oblique diameter	21 "
Left " "	22 "
External conjugate.	17 " plus.

She had then completed the eighth month of gestation, the fœtus being in the usual position, the vertex presenting. Fœtal heart-sounds were heard upon the left side of the abdomen, but less distinctly than normal, although fœtal movements were vigorous.

Upon examining the patient's urine it was found that she was excreting imperfectly, and that she was threatened with toxæmia. She was accordingly given appropriate treatment for this condition. Two weeks after her first coming to the hospital she was taken apparently with labor-pains; examination, however, revealed the fact that the fœtus did not engage, that the membranes were unruptured, and that her pains were not of a violent nature. She was found to be constipated, and was accordingly treated by purgatives and sedatives, when her pains ceased. As she was not under intelligent care at home, she was admitted to the Polyclinic Hospital that an intelligent study of her case might be made. On admission, it was found impossible to bring the head of the fœtus to engage in the pelvis. For this reason labor was not induced, as the disproportion between the head and the pelvis was so great that the induction of labor was not considered justifiable. The patient was given a warm bath daily, the action of the bowels was attended to, and she was kept under observation. She began to have labor-pains on December 15th, although they were not strong, nor did they increase in frequency or strength. As the head entirely failed to engage, dilatation was very slight, and the membranes pressed but very little against the mouth of the womb. It was evident on December 16th that spontaneous labor would not proceed, and that the patient must be delivered by some operative procedure. The vulva and vagina were small and ill-developed, and in view of the small size of the pelvis and of the birth-canal symphyseotomy was declined. It was ascertained that the patient had been leading an irregular life, and that she was without known friends. In view of all the circumstances in the case, it was thought best to deliver her by cœlio-hysterectomy. On December 17th, after suitable antiseptic preparation, with the assistance of Dr. Wells, Dr. Coles, and the resident staff, the patient was placed in the Trendelenburg posture, the bladder emptied by catheter, and the abdomen incised. The abdominal wall was very thin, and the sharp scalpel employed not only opened the abdomen but also made a small incision in the peritoneal coat of the uterus. This was followed by free bleeding, which necessitated the rapid completion of the abdominal incision, the turning out of the uterus, and the prompt delivery of the child. Upon opening the uterus the placenta was found directly beneath the line of incision, and it was observed that the first incision into the uterus, made when the abdomen was opened, had opened a sinus directly over

the placenta; this explained the bleeding, which, however, lasted but for a moment. The child was readily extracted, cried vigorously, and breathed naturally. The time occupied in opening the abdomen and extracting the child was two and one-quarter minutes. The uterus was then clamped by hysterectomy-forceps, the ovarian and uterine arteries ligated, and the uterus amputated at the juncture of the lower uterine segment with the upper contractile portion of the womb. The stump was closed by continuous silk sutures, and the peritoneal edges brought into approximation. There was no hemorrhage, and drainage was not employed. The peritoneum and fascia were then closed by a continuous fine silk suture, and the muscular wall of the abdomen brought together by silkworm-gut. An antiseptic dressing was applied, and kept in place by long strips of adhesive plaster and a flannel binder.

The after-history of the case was uneventful. The patient's highest temperature was 101° for a short time, her average temperature ranging from 99° to 100°. She nurses her child, which has grown naturally. The first dressing was removed sixteen days after the operation, when the stitches were taken out. It was found that the deeper tissues had closed by first intention, and that a few points in the edges of the skin were not in accurate approximation and were closing by granulation. Examination of the child showed it to be at full term, its head well ossified, and slightly larger than the normal skull. It is a male, and has increased in weight in the normal manner. The mother's supply of milk continues abundant.

The after-treatment of these cases, with the mode of dressing employed, is of importance. As the abdomen is closed without drainage, the operator does not expect to interfere with the wound until union has rendered the stitches unnecessary. But one dressing is needed for two weeks after the operation, and that should be the one first employed. After the sutures have been inserted the line of incision should be freely powdered with iodoform or with boracic acid and iodoform, and a thick dressing of antiseptic gauze and cotton placed upon the abdomen. This dressing should be kept in place by strips of adhesive plaster extending entirely over the dressing and upon the patient's thighs and sides. It is better in these patients to dispense with the tapes often employed, which are usually tied over the line of incision. As the incision is a long one, reaching above the umbilicus, it is essential that the patient's abdomen be kept as quiet as possible; hence the value of the adhesive strips which are not readily displaced. Over these strips an ordinary many-tailed bandage of flannel may be applied. In view of the length of the incision, it is well to leave the sutures in place as long as possible. They may remain to advantage for two weeks, at the end of which time the first dressing is made and the sutures are removed. The general care of the patient is that of any puerperal case. The intestines should be emptied within forty-eight hours after the operation, preferably by small doses of calomel, followed by rectal injection of salts and glycerin or of castor oil and turpentine. In other respects the patient's care should be

that of the normal lying-in woman. She should remain upon her back for three weeks before attempting to sit up, and should not stand or walk for four weeks at least after the operation. An abdominal bandage will often be a source of comfort to the patient, although, if union has been good, it is not a necessity.

I desire to call attention to the early history of Mrs. E. H., a patient operated upon at my request by my colleague, Dr. Baer. She has a funnel-shaped and flattened pelvis, whose diameters are as follows:

Anterior superior spines	28 cm.
Crests	30 "
Trochanters	29½ "
External conjugate.	19½ "

Palpation of the inner surface of the pelvis reveals marked narrowing toward the outlet. In comparison with the breadth of the patient's shoulders and the width of the iliac bones, it is also found that she has a flattened pelvis. She has been pregnant seven times, her first, third, fourth, and fifth labors being terminated by the use of forceps, with the birth of a dead child. All of these children weighed more than twelve pounds, the first thirteen and one-half. Her second labor terminated spontaneously, a small male child being born, although her medical attendant had sent for assistance to perform an instrumental delivery. This patient came under my observation in January, 1894, desiring the delivery of a living child Her fœtus was in breech presentation, and evidently a large one. She was delivered by me at the Polyclinic by cœlio-hysterotomy, Dr. Baer being present in consultation. The uterus was sutured, and the abdomen closed without drainage. She made an excellent recovery. Her child weighed eleven and three-quarters pounds, and was 52 cm. long; it is living and in excellent health. As the patient is a respectable married woman, her husband living, and as she expressed no wish to avoid further conception, I performed cœlio-hysterotomy as described. Early in 1895 she wrote me that she was pregnant again, and feared greatly the result of her pregnancy. I at once informed her that she could be delivered of a living child, probably without a serious operation, by coming to me in time for the induction of labor. She came to my office early in her pregnancy and was evidently in excellent condition. Her pregnancy was uneventful; she suffered some abdominal pain during the early months, which seemed to be due to possible adhesions between the uterus and peritoneum. This disappeared, however, and she remained in good health. She presented herself at the Jefferson Maternity near the end of her gestation, long after the period assigned for the induction of labor. In my absence from the city, I requested Dr. Baer kindly to take care of the patient. It was her expressed desire that this pregnancy should be her last. This case illustrates, I think, the choice of operation, and the fact that

with patients who are not always obedient to the physician's instructions it will not do to depend upon the induction of labor unless the patient co-operates loyally with the desires of the physician. When asked why she did not return for the induction of labor, she gave her fear of that method of delivery as the reason.

In conclusion, stress must be laid upon the great difficulty which the conscientious obstetrician will experience in choosing the form of delivery most likely to preserve the lives of mother and child. So remarkable are spontaneous births in abnormal cases that the physician must always give nature a chance to accomplish delivery. His attitude, however, must be that of one who delays watchfully and intelligently, and not with neglect. As stated in Cases I. and II., the induction of labor under antiseptic precautions should first be practised when full viability has been attained. In many cases spontaneous birth follows, or at most version or forceps will complete the labor. When, however, it is clearly evident that the fœtus cannot pass through the birth-canal without such injury to mother and child as will jeopardize the lives and health of both, it is the part of wisdom to choose that form of surgical delivery most suited to the condition and development of the mother. Where the child cannot enter the birth-canal the use of forceps is certainly contraindicated, and delivery must be accomplished by symphyseotomy or abdominal incision.