# Supra-Vaginal Hysterectomy for impossible labor, with intra-pelvic treatment of the stump.



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# SUPRA-VAGINAL HYSTERECTOMY FOR IMPOSSIBLE LABOR, WITH INTRA-PELVIC TREATMENT OF THE STUMP.[1]

## THE TECHNIQUE OF THE OPERATION.

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In opening the discussion upon the technique in hysterectomy for impossible labor, the part which has been assigned to me this evening, it would not be profitable to enter extensively into the early history of this subject, for the profession is already quite familiar with it. Nor have I anything new to present, as the technique which I shall describe and recommend will be practically the same as that which was advocated in the operation for fibroid tumor, in a paper read before the American Gynecological Society in 1892,[2] and which has been generally accepted as the best method of treating the stump in all cases where supra-vaginal hysterectomy is indicated in the non-pregnant uterus.

The advantage of dropping the cervix within the pelvis and leaving it in its natural position and relations had long been recognized; but when the cervical tissues were ligated *en masse* or in sections, as was practised by Schroeder and his followers, the mortality from hemorrhage and sepsis was so great that the extraperitoneal method of constricting the stump with a *serre-noeud*, and fixing it in the lower angle of the abdominal incision, became and remained the method of expediency until it was shown that hemorrhage could be controlled and sepsis obviated by a procedure which left the cervix entirely free and intrapelvic. The mortality of this intrapelvic method is at *least* as low as that of the extraperitoneal fixation method, and the advantages are so infinitely greater that no one who has had experience with it could be induced to return to the older way.

That this method could be safely applied in the Porro-Muller operation I was at once convinced, for the first case upon which I operated was one of pregnancy at the fifth month where labor was rendered impossible by the presence of a fibroid tumor which impacted and obstructed the pelvis, and in which the symptoms became so urgent that radical measures for immediate relief became imperative. This was not a full test, I grant, for the tissues of the cervix had not yet attained the size and vascularity which obtain at the full term of gestation. But later experience has fully established this question, for uniform success, I believe, has followed in all of

[1] Read before the College of Physicians of Philadelphia, February 5, 1896.

[2] "Supra-Vaginal Hysterectomy without Ligature of the Cervix. A New Method." By B. F. Baer, M.D. *Transactions American Gynecological Society*, 1892 and 1893.

the operations at full term in which the cervix was treated in this way, and the recovery of the patients was as uneventful as so usually occurs in the removal of the uterus in the non-pregnant state by this method.

The question as to the choice of the operation will be discussed by my colleague, Dr. E. P. Davis. I will therefore proceed at once with a description of the technique, and follow with a brief record of two cases.

In order that the best success may be won it is necessary that the diagnosis of impossible labor and a decision as to the choice of the operation shall be made previous to the full term of gestation, or at least before labor has begun, so that the environment and preparation of the patient may be rendered as perfect as possible. It is also necessary that efforts at delivery *per vias naturales* should have been avoided. The same arrangements should be made, if possible, as to the operating room, Trendelenburg apparatus and other operative equipment as for ordinary hysterectomy in fibroid tumor, and two more assistants are required than for the former operation; one to control hemorrhage by grasping the broad ligaments and cervix, the other to take the child from the hands of the operator as soon as it is delivered. If the patient does not object, she should be placed on the table before the anæsthetic is begun. The assistants and nurses should be previously informed regarding their various positions and duties during the operation, so that nothing may occur whereby the life of the child might be endangered. When the patient is anæsthetized the operator takes his position on the right side of the patient, his instrument tray being close to his right hand. Two assistants stand opposite; a third stands at the right of the operator, ready to receive the child. An incision, long enough to deliver the uterus, is now quickly made and observation is taken as to the presence or absence of adhesions. If any adhesions exist they must be separated before the uterus is delivered. The organ is then tilted slightly, so that a cornua emerges, when the remainder passes through easily. As soon as the uterus has emerged, an assistant immediately brings the edges of the abdominal incision together under it. A large sterilized gauze pad, which has been prepared for the purpose, is then placed under the uterus. This protects the abdominal cavity and serves as an absorbent of the discharges from the fœtal envelope. The other opposite assistant quickly encircles the broad ligaments and cervix with the left hand and makes sufficient constricting pressure to control hemorrhage. Incision is next quickly and carefully made through the uterine wall in the median line, beginning near the fundus and extending downwards. The right hand now ruptures the membranes and seeks preferably the feet of the child, by which it is delivered. If the placenta happens to be in the way it is pushed aside or broken through and no other attention given to it at this moment. The child is passed to the assistant in waiting to receive it, when the cord is clasped by a hemostatic forceps and severed; such measures as may be required for the resuscitation of the child being at once applied by the assistant in charge of it. The placenta is next delivered and the uterine cavity thoroughly emptied and cleansed. The uterus will now probably be found firmly contracted, and the operation may be continued without attention to the uterine incision, the assistant still grasping the pedicle.

When ready to proceed with the hysterectomy the pelvis should be elevated, but not to the extreme degree that is called for in the Trendelenburg posture. The latter is seldom necessary and may be harmful. Careful examination should now be made so that a clear idea may be obtained as to the location and relation of the broad ligaments, before the ligation is begun. This is especially necessary if the labor had been rendered impossible because of fibroid tumor.

The first step in the hysterectomy is the passing of a single silk ligature through the broad ligament near the cervix, which, being tied, controls the ovarian artery and veins. The ligament is then severed just below the tube and ovary, the incision being carried close to the cervix. The knife is then run lightly across the lower segment of the uterus, an inch or two above the peritoneal reflection of the bladder, care being taken to incise the peritoneum only. The latter is then stripped down with the handle of the scalpel. The purpose of this is twofold: first, it insures protection to the bladder and forms the peritoneal fold which is to cover the raw end of the cervix after the latter has been amputated; and, second, it facilitates the next and most important step, viz., the ligation of the uterine artery. If the artery is prominent and easily reached it may be ligated separately within the folds of the broad ligament. But if it is deeply situated and cannot be easily isolated, which is often the case, the finger and thumb then grasp the broad ligament on its anterior and posterior surfaces and locate the vessel by its pulsation. A ligature is then passed through the entire broad ligament below the artery, and just outside of but close to the cervix, care being taken to avoid the cervical tissue on the one hand and the ureter on the other. The ligature is now tied. Similar steps are taken to secure the vessels on the opposite side, and the cervix is then amputated just above the vaginal attachment. A small posterior fold is formed by stripping up the peritoneum while the amputation is being made. The stump is now held in the grasp of a small tenaculum forceps until the technique is finished. As a rule, if the main arterial branches have been properly ligated the raw end of the cervix will be found dry, but if any hemorrhage is present, of course additional measures must be taken to control it. If a vessel is found spurting it is ligated. If oozing from the stump is general and *persistent*, which is more likely to be the case in the puerperal cervix—it is very rarely so in the non-pregnant—catgut sutures should be passed through the cervical tissue to control it. These sutures must be placed so as *not to include* the peritoneal folds and are to be covered by these folds in the final technique. They should also be placed on either side of the cervical canal so that it may not be occluded. When all bleeding has ceased the peritoneal folds are closely adjusted over the stump and as many Lembert sutures are placed as are necessary to maintain this *close* adjustment. The number required will depend upon the manner in which the uterine arteries were ligated. If the ligatures securing these arteries have also passed through the broad ligament the peritoneal folds will be found taut, so that when drawn over the stump they will fit closely and press firmly against each other. Under these circumstances the adjustment may be so firm that further suturing is unnecessary, the edges being

merely infolded. But if this firm and close adjustment does not exist, then, of course, it must be secured by as many Lembert sutures as are, in the judgment of the operator, necessary. Nothing whatever is done to the cervical canal if the tissues are in a healthy state, but if efforts at delivery had been made, or if the child had been dead and septic discharges have been occurring, the canal and vagina must be thoroughly disinfected. The stump is now released, when it immediately recedes into the pelvis, and occupies its normal position. After toilette of the peritoneum, the abdominal incision is closed and dressed in the usual way. Drainage is almost never necessary.

In the original description of the technique the following sentence occurs: "The steps of the operation vary somewhat, to suit the complications which may be present in the individual case, but the general direction and the conclusion are practically the same in all cases." [1]

If it had been thought necessary to elaborate this statement it would have been written somewhat as follows: The termination of the technique by which the cervix is left without a ligature in its tissues, the cervical canal undisturbed, and the stump securely covered under the peritoneal folds is not always accomplished and completed by the same routine. For instance, it might be most convenient to begin by first ligating on the right side. If not so, begin on the left. In another case it might be deemed best to grasp the ligaments, including the blood-vessels, with a clamp-forceps, sever the ligaments, amputate the cervix and then place the ligatures, with the uterus out of the way. At another time it might be deemed best to ligate one broad ligament, sever it and amputate the cervix, and then grasp and sever the vessels and ligaments on the other side, and thus completing the technique, again with the uterus out of the way. Each case should be managed by the steps which will best facilitate the conclusion of the operation as described.

CASE I.—*Supra-vaginal hysterectomy for fibroid tumor complicating pregnancy and rendering labor impossible.* Mrs. H., aged thirty-seven years, was married in February, 1891. Menstruation had become rather profuse during the two preceding years, but the patient considered herself in good health until five months after her marriage, when she began to experience pelvic pressure symptoms. Her catamenia had been suppressed in June. About September 1st she was suddenly attacked with severe pain in the pelvis and along the course of the sciatic nerves. She also suffered severely from rectal and vesical tenesmus. I first saw the patient on September 28th. She was then extremely anæmic and appeared to be in great distress. The abdomen was distended by an irregular tumor which extended above the umbilicus. The tumor mass was in two parts, being larger on the right side and separated by a sort of hour-glass constriction. The mass on the right side was rather globular and conveyed a boggy, semi-fluctuating sensation, while that on the left was quite firm, at one point having a projection of almost bony hardness. Vaginal examination revealed the pelvis to be occupied by a firm, hard tumor larger than a child's head. It entirely

[1] Ibid.

filled the pelvic cavity and was immovably fixed. The cervix uteri could not at first be found, but it was finally located above the transverse ramus of the pubic bone and almost out of reach of the finger, where it was flattened between the bone and the tumor. By combined palpation the globular mass on the right side was shown to be continuous with the cervix. The usual mammary changes of pregnancy at the fifth month were present, and there was a well-marked uterine bruit. The diagnosis of fibroid tumor complicating pregnancy and rendering labor impossible was established.

The great suffering and danger of the patient made it imperative that steps should be at once taken for her relief, and she was transferred to the Polyclinic Hospital, on the next day, September 29th.

*Operation, October 2, 1891.* After anæsthesia, I endeavored to dislodge the tumor and elevate it into the abdominal cavity, with the hope that the pregnancy might go to term, but failed, and therefore decided to open the abdomen. I began by making an incision three inches in length, when the pregnant uterus was exposed to view. The organ was above and resting on the right side of the tumor, being connected with the latter by a pedicle about an inch in diameter. The left broad ligament and the tube and ovary were stretched over the tumor. Passing my hand beneath the uterus and over the pelvic mass, I found the latter very firmly fixed in the pelvis, not, however, by inflammatory adhesions. The incision was now slightly increased, when the uterus emerged from the abdominal cavity. The tumor was then dislodged after great effort and rotatory movement. The propriety of removing the tumor and leaving the pregnant uterus was now considered, but further examination showed that the organ contained another tumor embedded in its wall; there were also several malignant-looking white protuberances on its surface. I therefore determined upon hysterectomy. The operation was concluded by the technique described, although the different steps were not carried out in the same order, for it was during this operation that the method was evolved. In this case the peritoneal folds were secured by a row of Lembert sutures. The patient made an uninterrupted recovery, being apparently convalescent from the beginning. I examined this patient four years after the operation and found her in perfect health.

CASE II. —*Supra-vaginal hysterectomy for impossible labor in a woman who had been delivered by the Cæsarean section eighteen months previously.*

Mrs. E. H., aged twenty-seven, entered the Polyclinic Hospital by direction of my colleague, Dr. E. P. Davis, on January 14, 1894, in labor. The patient had been examined some time previously by Dr. Davis, when it had been determined that the successful delivery of her child would be impossible without operative aid.

Examination of her pelvis at this time gave the following measurements:

| | CM. |
|---|---|
| "Anterior superior spines | 28 |
| Crests | 30 |
| Trochanters | 29.5 |
| External conjugate | 19.5 |

"Vaginal examination showed the rami of the pubis approximating each other much more closely than normal. Palpation of the inner surface revealed a funnel-shaped pelvis, the cavity narrowing very appreciably toward the outlet. In comparison with the breadth of the patient's shoulders and the width of the iliac bones, it was seen that she had a flattened and converging pelvis.

"This was her sixth pregnancy. Her first, third, fourth and fifth labors had been terminated by the use of the forceps, each labor resulting in the birth of a dead child. All of these still-born children were large, weighing over twelve pounds. The second pregnancy resulted in the spontaneous delivery of a living male child, after a very severe labor, but this child happened to be quite small."

Some hours after her admission, Dr. Davis kindly requested me to see the patient in consultation with him and Dr. R. P. Harris. The question of symphysiotomy versus Cæsarean section had been discussed before my arrival, and for reasons stated by Dr. Davis in his report of the case, the latter operation was favored. Dr. Harris at first favored symphysiotomy, but the apparently large size of the child and the diagnosis of breech presentation, together with the peculiarly deformed pelvis had caused him to change his view. I very readily concurred in the wisdom of this choice and had the pleasure of aiding in the operation, which was immediately undertaken. The child, a female, weighed about twelve pounds. The patient and child both did well.

A year later Mrs. H. feared that she was again pregnant, and examination revealed that she was about three months advanced. She was urged to keep herself under observation so that premature labor might be induced at the proper time, should it be deemed advisable. The relative risks of this operation, in view of the recent Cæsarean section, were explained to her.

She did not favor the premature labor, largely because of the greater danger to the child, and for the additional reason that she wished to be protected from the risk of future pregnancy should it be again necessary to make abdominal section. She did not again report until near the full term, when she was transferred to my care. She entered the Polyclinic Hospital, on July 9, 1895, a week before full term. The abdomen was greatly distended and the child was evidently large. The breech appeared to be in the right iliac fossa, and the heart sounds were best heard about three inches above, and to the right of the umbilicus. The uterine bruit was heard most distinctly over the anterior surface. The examination of the pelvis agreed with that already given. It appeared to be a shallow funnel, the greatest contraction being at the outlet.

Both the patient and her husband were urgent in their request that measures should be taken to save the patient from the danger of future pregnancy.

She was accordingly placed in preparation, and on July 16th, late in the afternoon, signs of approaching labor were manifest. I was telegraphed for, having gone out of town for the evening, and at eight o'clock the operation was begun. I was ably assisted by Drs. Erck, Wells and Gans.

Incision, through the old cicatrix, exposed the uterus ; the organ was then slightly tilted so that the right cornua could emerge, when the remainder was easily delivered. Dr. Wells now controlled the circulation by encircling the broad ligaments and cervix with the left hand. The uterus was then incised, the membranes ruptured, and the child delivered by the breech, which was found in the right iliac fossa. The cord twice encircled the child's neck, but it was not in the least asphyxiated and began to cry, almost before it was out of the uterus. The placenta was attached to the anterior wall, in the identical position which it occupied in the previous pregnancy when the Cæsarean section was performed. By the time the child, placenta and membranes were delivered the uterus was firmly contracted, and remained so during the hysterectomy, which was concluded by the technique just described. The patient withstood the operation without the slightest evidence of shock and her recovery was as easy as after a normal labor. The child weighed about twelve pounds She has nursed the child continuously since the operation. It is now seven months of age, and continues robust.