

CONSERVATIVE CÆSAREAN SECTION BY THE LOWER UTERINE SEGMENT INCISION

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DANGERS AND POSSIBLE COMPLICATIONS

THE dangers and possible complications of the lower uterine segment operation are few. While the bladder might appear to be in danger, it is really very safe. As the lower uterine segment becomes more and more stretched it rises above the bladder; there may be a depth of as much as 5 inches between the apex of the emptied bladder and the upper margin of the loose portion of the peritoneum covering the front of the uterus, which margin may be taken for practical purposes to indicate the upper border of the lower uterine segment. The uterine incision described in this article is made in a transverse direction, so that there is ample space in which to open the lower

uterine segment without even disturbing the bladder.

When the operation is performed too early in labor, or when the head is exceptionally large, there may be difficulty in securing sufficient breadth of the uterine incision for the delivery of the head. To avoid damage to the large vessels at the side of the uterus at this stage, the incision may with advantage be made in a curved form with the convexity directed downward.

PREPARATION OF THE PATIENT

The preparation of the patient for this operation is similar to that required for any abdominal operation, and need not be detailed. It is very

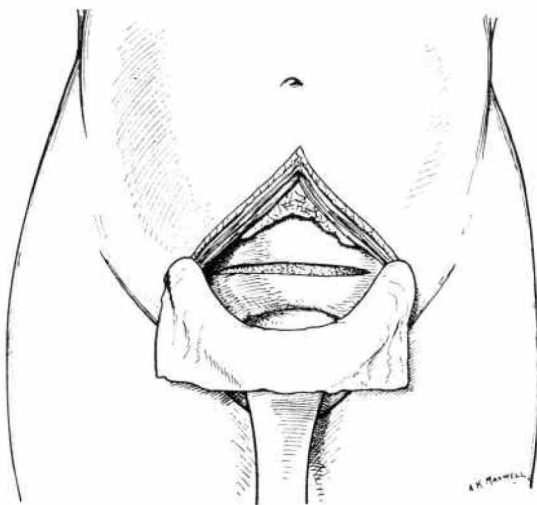


Fig. 1. Incision through loose peritoneal covering of uterus.

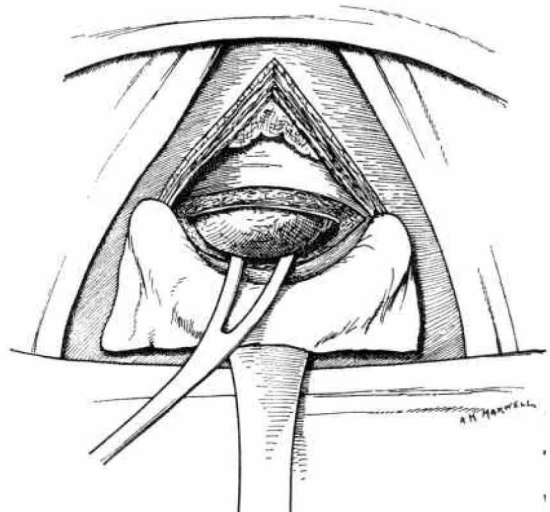


Fig. 2. The head may be picked up with short obstetric forceps which are used as guides, not tractors.

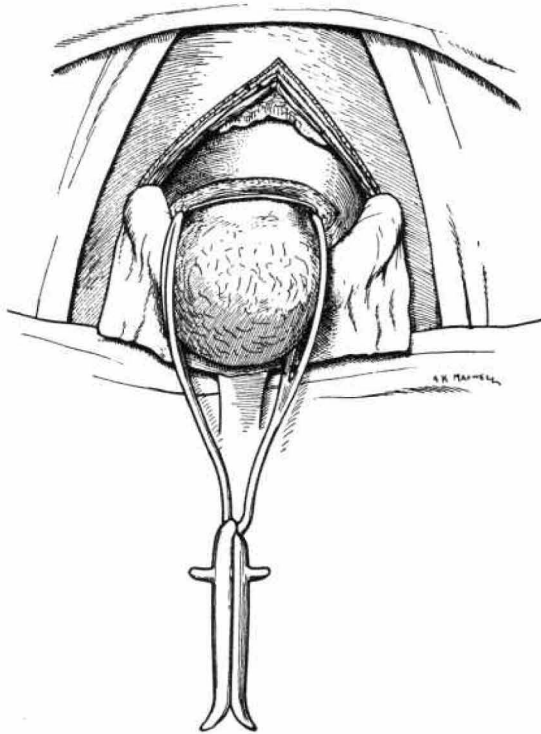


Fig. 3. Delivery is completed by pressure on the fundus.

important that the bladder be thoroughly emptied by catheter just before the operation.

TECHNICAL STEPS OF THE OPERATION

The patient is placed in the Trendelenburg position. One-half cubic centimeter pituitrin is injected into the triceps muscle to secure prompt contraction when the uterus is emptied. A longitudinal incision, about 6 inches in length, is made through the abdominal wall in the middle line, the lower end just reaching the symphysis pubis. The lower end of the wound is then retracted over a protecting layer of gauze with a Doyen's retractor. The rest of the abdominal cavity is protected by packing off the upper portion of the operation area with gauze. A transverse incision is made through the loose peritoneal covering of the uterus, about half way down the lower uterine segment (Fig. 1). A curved incision as described is then made through the uterine wall in the same region. When the center of this incision is complete, a blunt-pointed bistoury is employed to extend it in either direction to the required degree. If the head is not easily accessible, pressure on the fundus through the abdominal wall often brings the occiput into the wound. To avoid handling,

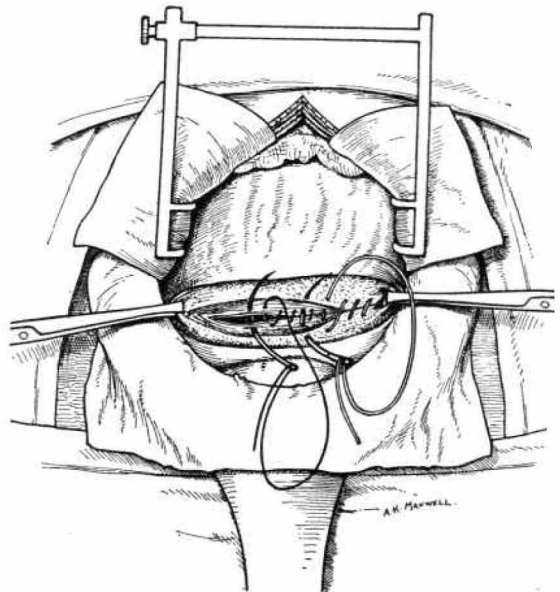


Fig. 4. Self-retaining tractor has been inserted and suture of wound commenced.

especially in presumably infected cases, the head may then be grasped with a pair of short obstetric forceps used as guides and not as tractors, and the delivery completed by pressure on the fundus (Figs. 2 and 3). The umbilical cord is ligated and divided in the usual way. A self-retaining retractor is now inserted to keep the sides of the abdominal wall apart (Fig. 4). If the cervix is not well dilated, the placenta is delivered by compression of the fundus through the abdominal wall, and traction on the cord. An intramuscular injection of a sterile preparation of ergot is given at this stage. If the cervix is known to be well dilated, and this is a most important advantage in an infected case, the placental end of the cord is dropped back into the uterus, the placenta and membranes being expressed *per vias naturalis* when the abdomen has been closed. By this means intra-uterine manipulations are reduced to a minimum. The edges of the uterine wound are now picked up with fine tissue forceps or temporary silk ligatures. The mucous membrane, with the innermost portion of the muscle coat, is sutured with a continuous No. 1 chromic gut suture, the edges of the mucous membrane being directed inward toward the uterine cavity (Fig. 4). The remainder of the muscle coat is carefully approximated and sutured with a continuous No. 2 or No. 3 chromic gut suture (Fig. 4). Great care must be taken to secure completely the lateral extremities of the incision. The peritoneum over the uterus is closed with a

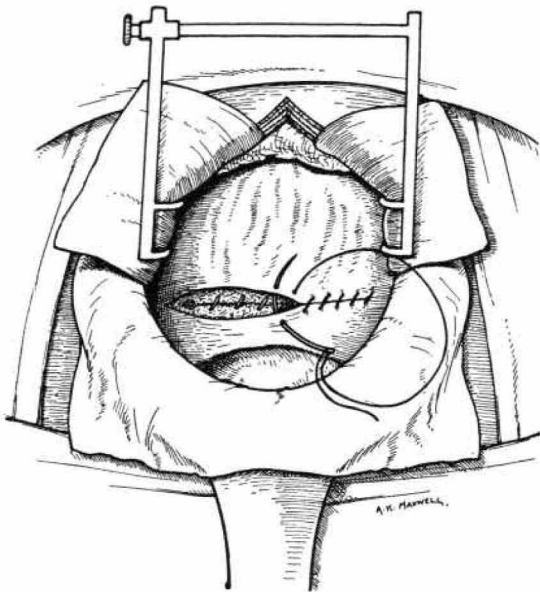


Fig. 5. Suture of peritoneum over the uterus.

continuous No. 1 or No. 0 catgut suture, the operation area being thus completely shut off (Fig. 5). The gauze packing is removed, and the abdominal wall carefully closed in layers. The surface of the wound is secured with an anchored dressing as shown in Figure 6.

POSTOPERATIVE CARE

No special postoperative treatment is employed. It is advisable to make sure that the bladder does not become overdistended. Special attention must be paid to the lowermost portion of the abdominal wound as the abdominal wall sometimes tends to lie in a fold just over the symphysis pubis, thus increasing the risk of wound infection. The patient is kept with the shoulders slightly raised so as to secure satisfactory drainage. The abdominal stitches are removed on the tenth day. The patient is generally allowed out of bed on the sixteenth day.

GENERAL REMARKS ON PROGNOSIS

The prognosis we have found to be very satisfactory, and the uterine scar, as evidenced by "repeat" operations, has proved sound in all cases except one, in which there was definite thinning at the right end of the scar. In most cases no trace of the scar could be found.

As will be observed, the uterine incision is a transverse one, which we think better than the longitudinal one very frequently employed. With the latter, there is a risk of the upper part of the

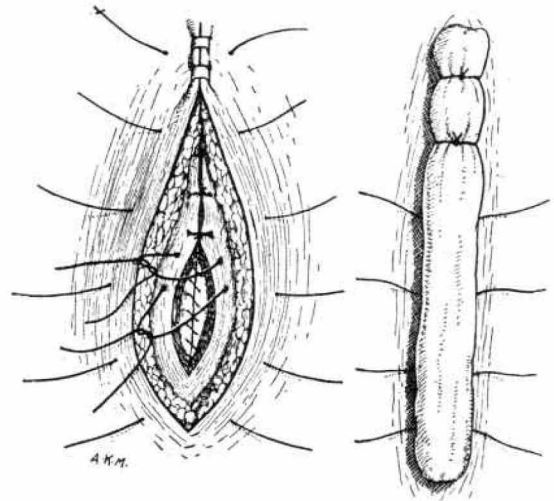


Fig. 6. Closure of abdominal wound. Method employed by author. Continuous catgut sutures for peritoneum, interrupted cutgut for sheath, interrupted silkworm through whole thickness of wall except the peritoneum. Michel's clip for skin. Two silkworm stitches are shown tied over thin strip of gauze. This is the only dressing.

wound extending into the active contractile portion of the uterus, and this occurred definitely in four out of all the five cases recorded of subsequent rupture of a lower uterine segment scar. Those cases were recorded by Wolff, Franz, Freund, and Baisch. The extension of the longitudinal incision downward has resulted in several cases of injury to the bladder.

Our reasons for believing that an absolutely sound uterine scar cannot be secured in the active contractile portion of the uterus may be stated as follows: (1) difficulty in securing complete asepsis; (2) the uterine muscle fibers during the puerperium are in a state of degeneration; (3) the sheets of muscle fiber which form the uterine wall, are irregularly distributed, so that it is impossible to coapt the muscle fibers exactly (in consequence, small pockets of blood collect, which in the process of healing are replaced by fibrous tissue); (4) The uterus is in a state of unrest during the early days of the puerperium; (5) the necessity imposed upon the surgeon of using his ligatures not only as coaptors, but as hæmostatic agents; (6) if the placenta is situated on the anterior wall, as occurs in 40 per cent of cases, the operator will find that satisfactory coaptation of the uterine surface of the wound is difficult to establish, because this surface is very friable and contains large sinuses.

Another great advantage of this operation over the classical one is that the operation area can be

completely closed over with peritoneum, and consequently postoperative adhesions are seldom found. In our experience the widespread adhesions after the classical operation form a very considerable operative difficulty, when a second caesarean section becomes necessary.

The following is a brief summary of results in a series of 107 cases

Cases	Total	Maternal mortality	Percentage
"Clean".....	82	0	0
"Doubtful".....	25	4	16

In "clean" cases are included only those in which all pre-operative vaginal examinations were carried out in hospital: "doubtful" include all the others. The interference in the latter series varied from the previous unsuccessful application

of forceps under domestic conditions to unsupervised vaginal examinations by nurses or midwives: in 12 of the series, including 2 of the fatal cases, not less than five such examinations had been made in each case.

SUBSEQUENT LABORS IN 26 OF THE ABOVE CASES

	Cases
Second caesarean section of the lower uterine segment type.....	17
Second caesarean section of the classical type.....	6
Spontaneous delivery of a smaller child.....	2
"Low forceps".....	1

There were no maternal deaths in this series. In only one of the cases already referred to was any thinning of the scar found at the second operation, and that in a case in which the patient had been several hours in labor.