A CASE OF RUPTURE OF THE LOWER SEGMENT CAESAREAN SCAR DURING LABOUR

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With the increasing safety of abdominal sections, the scope of caesarean section has gradually widened from absolute indications like cephalopelvic disproportion to include temporary indications like primary uterine inertia or toxaemia of pregnancy. But once a caesarean section, the subsequent obstetric career of the patient is fraught with the fear of the scar yielding either during pregnancy or labour. Fortunately the recent trend is towards lower segment caesarean. The safety of vaginal delivery in the next pregnancy is greater with a lower segment scar than after a classical caesarean. According to Lawrence, rupture of the uterine scar is three times more common after a classical operation than after a lower segment section. In his series of 310 patients who were allowed vaginal delivery after a previous lower segment, there were two ruptures—an incidence of 0.65%; but successful vaginal delivery occurred in 26.9% of these patients.

I followed a case through both her deliveries. The details are as follows:

Patient M., 18 years, primigravida, was admitted at full term into the Women and Children's Hospital, Egmore, on 29-8-1949 at 12-20 P.M. with a history of having been in labour for about 24 hours and handled outside by a barbar-midwife. On examination, she was not anaemic; tongue clean and moist. Uterus was full term, acting moderately, head was not engaged, presentation vertex, left occipito-anterior position. Foetal heart was regular and about 140 per minute.

Temperature: 99.6°F.; Pulse: 104 per minute. Blood pressure: 130/90 mm of mercury. Urine: Trace of albumen.

Pelvic measurements:

Intercristal diameter	9½ inches.
Interspinous diameter	8½ inches.
External conjugate	6½ inches.

Vaginal Examination. Brownish discharge present per vaginam. Cervix taken up and 3/5th dilated, membranes absent; major portion of the head still above the pelvic brim; moderate caput; meconium-stained liquor amnii present.

Operation Notes. (2 P.M. on 29-8-49). Under general anaesthesia (gas and oxygen), lower segment caesarean section was done and a slightly asphyxiated male child

(weight 6½ lbs) was delivered and revived. The placenta with membranes was removed after injecting 5 units of pitocin into the uterine muscle. The uterine wound was closed in two layers—one of interrupted silkworm gut and one of continuous catgut. The peritoneal flap was closed over the lower uterine segment. After putting into the peritoneal cavity 400,000 units of penicillin solution, the abdomen was closed in layers.

Postoperative Period: Temperature fluctuated between 100°F. to 102°F. accompanied by slight abdominal distension during the first three days. Penicillin 500,000 units, was given intramuscularly soon after the operation and later on 200,000 units at 8 hourly intervals. On the fourth day, there was no abdominal distension but a low temperature (99°—100.4°F.) persisted for a week more. The skin clips were removed on the tenth day and the wound had healed well. On 11-9-49, the mother and child were doing well and were discharged with the advice to attend the postnatal department.

She failed to avail of the facilities at the postnatal clinic. Neither did she turn up at the antenatal department during her next pregnancy. For the second confinement she was admitted at full term into the Lying-in Hospital on 11-10-1952 at 12-40 P.M. after having been in labour for 11 hours—the bag of membranes having ruptured four hours earlier.

On examination, she was not anaemic. Uterus was full term with moderate pains at intervals of about three minutes. The head was not engaged, position left occipito-anterior. Foetal heart regular, about 138 per minute. The subumbilical median abdominal scar was not tender. Temperature 99.4°F; Pulse 106 per minute. Blood pressure 110/70 mm. of mercury. Vaginal examination showed that the cervix was 4/5th dilated with a thick rim palpable all round; the membranes were absent; vertex presentation with the greatest diameter above the pelvic brim; marked moulding with moderate caput; no cephalopelvic disproportion; meconium-stained liquor amnii escaping.

As there was evidence of foetal distress with the greatest diameter of the presenting part above the pelvic brim, immediate abdominal route of delivery was decided on.

Operation Notes. Under general anaesthesia (gas and oxygen supplemented with Trilene and ether) the abdomen was opened by right paramedian incision. There were numerous adhesions between uterus, omentum and anterior abdominal wall. On separating the adhesions, it was found that there was a large haematoma in the right broad ligament. The lower segment was stretched in the region of the vesico-uterine fold of peritoneum and meconium stained viscid fluid was escaping from a rent of about an inch along the transverse scar of the previous operation. A female child, weighing 6¾ lbs. was quickly delivered through a classical incision. The baby was covered over with meconium and was deeply asphyxiated, but was revived. Subtotal hysterectomy was done at the level of the rupture. After

cleaning the peritoneal cavity, abdomen was closed in layers. Patient was given 550 ml. of 5% glucose and 600 ml. of 'A' group blood during the operation.

Postoperative Period. During the first three days temperature ranged from 100°F.—101°F. with slight abdominal distension. She was put on penicillin 200,000 units intramuscularly every 8 hours and streptomycin ½ gm. twice daily for four days. The temperature returned to normal on the fifth day and since then the post-operative period was smooth. The clips were removed on the ninth day and the wound had well healed. The child was being breast-fed from the third day onwards.

Postnatal Pelviradiography. Platypelloid gynaecoid type of pelvis of average dimensions.

On 28-10-1952 mother and child were doing well and were discharged.

Discussion. The problem of caesarean scars has been studied by numerous workers. Over 30 years ago, Williams thought that the healing is by replacement with uterine muscle fibres. Schwarz and Paddock were of the opinion that healing was due to proliferation of fibrous tissue. But recently, Hess working on experimental animals showed that after lower segment section healing occurs mainly by fibrous tissue replacement; and after classical caesarean healing is with both muscle and fibrous tissue. Sepsis interferes with proper healing and leaves behind a weak scar. Baker emphasises that for a sound scar, the incision should be placed as low as possible over the lower segment and that the ends should be carefully sutured.

The number of cases of rupture of the transverse uterine scar after lower segment caesarean has been extremely small. After an exhaustive survey of the literature for 15 years, Lawrence estimated that there were only 22 such cases and added two of his own. Rupture of the longitudinal scar in the lower segment, however, is met with more often. Dewhurt and Rawley found 66 cases in the literature (probably with less rigid check up and including cases where the details were scanty or absent). In addition, they described two more cases. In both, the lower segment had yielded during labour and the visceral peritoneum was ballooned out by the bulging amniotic membranes. Uterine contractions were present in both the cases. In every case of rupture of the lower segment scar so far reported, the patient was in active labour. The risk of rupture during pregnancy, therefore, is almost negligible. This is in marked contrast to rupture of the classical scar where the catastrophe may occur even before the labour starts. Being more avascular, the bleeding is less severe and not so sudden when the lower segment scar yields; and hence the general condition of the patient remains better, unlike in a case of rupture of the classical scar where due to sudden and profuse haemorrhage, there is a rapid deterioration in the patient's condition. As the rupture is often incomplete, maternal and foetal salvage rate is high. The misleading

sign in these cases, however, is persistence of regular uterine contractions. The usual line of treatment in these cases of ruptured transverse scars is delivery through the opened lower segment wound and repair of the lower segment with sterilization; or, extending the wound round the site of rupture to perform a subtotal hysterectomy.

In the case described, the scar might not have healed well due to the intrapartum sepsis and the infection persisting during the immediate postoperative period. When she reported late in labour for the second delivery, the rupture was not diagnosed on admission; but was discovered when the abdomen was opened for a repeat section. The child was delivered through the classical incision quickly in order to resuscitate it early. Subtotal hysterectomy was then performed.

Summary. A case of rupture of the lower segment caesarean scar during labour is described and briefly discussed.

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References:

1. Baker, K.: Jour. Obst. & Gynae. B. E.; Vol. 60, 267, 1953.
2. Dewhurt, C. J. & Rawley, M. A.: Jour. Obst. & Gynae. B. E.; Vol. 58, 630, 1951.
3. Hess, C. W.: S. G. O.; Vol. 96, 587, 1953.
4. Lawrence, R. F.: Jour. Obst. & Gynae. B. E.; Vol. 56, 1024, 1949 and Vol. 60, 238, 1953.