Medical Memorandum

Vaginal Hysterectomy for Complete Rupture of Uterus during Labour

The following case is recorded, in spite of the fatal termination, because the operative procedure described might be of value to other obstetricians confronted with the same complication under similar working conditions.

CASE REPORT

A Yoruba multipara aged 23, who had not attended the antenatal clinic, was admitted at term on April 6, 1950, having been in labour for nine hours, the membranes having ruptured at the beginning of the uterine contractions. Before admission she had been bearing down in the customary kneeling position for some three hours without advance, and this was followed by absence of uterine contractions for the next three hours. She had had no sudden abdominal pain, fainting, or shoulder pain, and no bleeding per vaginam.

On examination her temperature was 99° F. (37.2° C.), pulse 120, respirations 28, and blood pressure 80/40 mm. Hg. There was some degree of anaemia, and she seemed restless, with mild continuous lower abdominal discomfort. The abdomen was tense, and markedly tender below the umbilicus, up to which the bladder extended. Foetal parts were difficult to define except in the epigastrium, where the breech was located. The foetal heart was not heard.

Rectal examination revealed that the cervix was fully dilated, and a marked caput could be felt in low mid-cavity. Under thiopentone and open ether anaesthesia, and after catheterization, vaginal examination revealed that the head was arrested deeply in the left transverse (L.O.T.) position, with a marked caput. The sacral promontory was acutely projecting forwards, the diagonal conjugate was 4½ in. (11.4 cm.), the upper half of the sacral bay was straight, and the pelvic outlet was normal. On withdrawing the hand there was a free loss of blood. On re-examination a complete rupture of the uterus was found at the utero-vaginal (syn. cervico-vaginal) junction, extending along the whole of the anterior surface from half-way along the left lateral margin to the right antero-lateral margin of that junction. The foetal body and limbs and the placenta and membranes had been extruded into the peritoneal cavity, and the uterus, which was lying in the right iliac fossa, was freely mobile.

In view of the presence of active bleeding, which might have been arising from the left uterine artery, it was considered wiser to act at once, because there was no possibility that the operating theatre would be available for at least two hours, and blood donors and a qualified anaesthetist were not available. Moreover, the patient's general condition was now poor—pulse 140, blood pressure 80/30 mm. Hg.

After an unsuccessful attempt at manual rotation it was considered unwise to rotate and deliver with Kielland's forceps, which might have extended the tearing. The head was pushed up, and an intraperitoneal podalic version was easily performed, followed by a breech extraction of a fresh stillbirth, weight 6 lb. 3 oz. (2.8 kg.). The placenta and membranes, weighing 19½ oz. (0.55 kg.), were manually removed from the peritoneal cavity through the uterine rent. It is the routine here at operations to have four sponge-holders placed on the instrument trolley for post-partum inspection of the cervix. While the uterus was being pushed into the pelvis to reveal and facilitate clamping the free margins of the tear, it was found that the uterus was so mobile that it descended to the vaginal outlet. A vaginal hysterectomy was then regarded as possible, whereupon two fingers were hooked into the uterine cavity and with further suprapubic pressure the fundus of the uterus was delivered under the symphysis pubis. The Fallopian tubes, ovarian vessels, round ligaments, and broad ligaments were clamped and divided in the usual fashion, and ligated with No. 2 catgut, followed by reconstitution of the vaginal vault.

In view of the difficulty of ligating the lower end of the tear on the left in the region of the utero-vaginal junction, two clamps were left *in situ*. Haemostasis being ensured, the vagina was then packed with gauze soaked in 1 in 1,000 acriflavine, and an indwelling catheter inserted into the bladder.

Immediately after the operation the pulse was imperceptible and the blood pressure was 40/0 mm. Hg. Some 30 minutes after an injection of ½ gr. (50 mg.) of ephedrine intramuscularly, 1.7 ml. of nikethamide, and 8 min. (0.48 ml.) of adrenaline hydrochloride (1 in 1,000) the blood pressure was 80/40 and the pulse 150. The patient continued to make excellent progress, and was given antibiotics, antitetanus serum, and the antimalarial quinine sulphate.

Fifteen hours later, when the temperature was 99.6° F. (37.55° C.), pulse 112, and blood pressure 112/58 mm. Hg, the packing, clamps, and catheter were removed, after which there was no bleeding. Early removal of the packing and clamps is considered to be essential in tropical climates because of the danger of sepsis. Progress continued to be good, with minimal distension and no vomiting, until on the third day, 68 hours after operation, she suddenly collapsed and died within 30 minutes.

Post-mortem examination revealed a large quantity of free blood in the peritoneal cavity, with some localized plastic peritonitis around the left ovario-pelvic ligament, from which the secondary haemorrhage appeared to have arisen. There were no other abnormalities and no bleeding per vaginam. It was of interest to note the firmness and effectiveness, against subsequent prolapse of the bowel, of the reconstituted vaginal vault, which was sloping downwards and backwards from behind the bladder and symphysis pubis towards the hollow of the sacrum.

COMMENT

There is no doubt that laparotomy performed some two hours later would have been fatal, should the patient have survived that interval of time until the operating theatre had been vacated. Alternative procedures would have been to displace the head or to perforate and extract and to attempt to secure the free margins of the uterine rent with clamps, and then to perform a laparotomy at the first available opportunity. This would have necessitated a second anaesthetic, haemostasis might not have been successfully secured by the clamps, and blood donors would still not have been available.

Until the patient's sudden death the post-operative condition (after the first half-hour) was good. This fact is worthy of note, because the convalescence has been stormy in our cases of ruptured uterus that have survived laparotomy.

The operation was simple and rapid, under conditions in which irritating delays can lead to a fatal issue. The uterus, which weighed 26½ oz. (0.75 kg.) and was 6½ in. (16.5 cm.) in length, 5 in. (12.7 cm.) broad, and 3 in. (7.6 cm.) in thickness, was easily made to traverse the pelvic cavity.

In future, silk sutures rather than catgut, as used in this case, would be preferable for ligating the enlarged vessels associated with pregnancy, and also because of the added danger of infection in the Tropics. Perforation and extraction might be preferred to the procedure of extraction adopted, with less risk of infection and trauma.

The operation of vaginal hysterectomy is therefore advocated for the type of rupture here described, which was an extensive one at the utero-vaginal junction, producing unusual mobility of the uterus; and particularly is it recommended in this form of rupture when the facilities for immediate laparotomy and resuscitation are not available.

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