ACUTE INVERSION OF THE UTERUS

A CASE REPORT

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Acute inversion of the uterus is a distinctly uncommon occurrence. This serious complication of labour is variously stated to have an incidence of 1 : 4,333,[1] 1 : 17,000,[2] and 1 : 400,000.[3]

In this case there was the additional probable aetiological factor of placenta accreta. The writer had the opportunity of observing the mechanism of inversion from its inception to completion.

The patient was a primigravida aged 25 years. She had been married for 4 years, during which time she had undergone a full investigation for infertility. Laparotomy had been performed in October 1956 and it was then noted that the uterus was 'small, had a fundal notch, and seemed to be thin-walled'. The impression was that of hypoplasia and her chances of becoming pregnant, or at least going to term, were not considered to be good at all.

The last menstrual period was on 13 November 1956 and the estimated date of delivery was 22 August 1957. The blood group was 'O'; Rh.-negative; Ide-negative.

Many minor troubles occurred during pregnancy. Constipation was obstinate. Complaints of abdominal discomfort with pain over the uterus were fairly frequent. Two months before term the patient fell and injured the right knee, after which both legs were periodically swollen. Weight gain was excessive and oedema apparent.

On 24 August 1957 she was admitted for induction of labour. Castor oil, strippings of the membranes and an injection of pitocin were required to start labour by 12.05 p.m. the same day. By 7.25 p.m. the cervix was fully dilated and the patient bearing down with the head visible on the perineum. Labour was terminated, because of a minor foetal heart irregularity, by low forceps under local anaesthesia. A live female child of 6 lb. 6 oz. was easily delivered, with the umbilical cord 4 times round the neck. This shortening necessitated cutting the cord before completion of the delivery.

Intramuscular ergotrate had been given on delivery of the head. The uterus contracted well after fundal massage and the placenta could be seen just inside the loose dilated cervix. Bleeding was slight. Two fingers were hooked round the lower placental edge and light traction made, together with fundal pressure. It was thought that a slight dimpling of the right side of the uterine fundus occurred but it was evanescent. A repeat attempt at expression, with the fundus very definitely firmly contracted, was now made. The dimpling now recurred and it was then realized that one was dealing with a placenta accreta. In spite of immediate cessation of efforts to remove the placenta and efforts to stop the occurrence of inversion, the right wall of the uterus seemed to roll inexorably down and out through the widely dilated flabby cervix until the whole uterus and vagina were completely inverted.

Pain was severe and shock marked (systolic blood pressure 30 mm. Hg, pulse 140 plus) with the patient practically unconscious. Air hunger was not noted immediately.

Morphia, hydrocortisone and intravenous fluids were given whilst waiting for an anaesthetist and for blood. On arrival the anaesthetist commented on the intense generalized vasoconstriction, the widely dilated pupils, and the presence of air hunger.

By 7.40 p.m. one was ready to attempt replacement under anaesthesia. Even with the placenta attached, the uterus seemed strikingly small. The placenta was attached to the right anterolateral wall of the uterus and extended well onto the lower segment. Great difficulty was experienced in removing the placenta and membranes. They had to be pulled and scraped off piecemeal, leaving the uterus ragged in the extreme.

Replacement of the uterus was simplicity itself. Grasping the uterus in the hand it was slowly and steadily pushed back through the vagina and cervix, against light abdominal counter-pressure, until the fundus seemed to slip up and away, undoing the inversion. Inversion replacement time was about 17 minutes.

The patient's condition improved noticeably as soon as replacement was completed, in spite of the measured blood loss of 80 oz. during removal of the placenta. No tendency to recurrence was noted and by 11.30 p.m. the patient's condition was such as to cause no further worry.

Antibiotics were exhibited in full doses. The puerperium was normal, the lochia not excessive and breast feeding satisfactory.

COMMENT

Aetiology and treatment are the two problems in this type of acute inversion.[4]

About 40% of cases are 'spontaneous', according to Das.[5] Cord traction when the uterus is relaxed, direct fundal implantation of the placenta, and injudicious or violent[6] Credé expression, are mentioned in most standard textbooks. A lax dilatation of the cervix[7] and placental site atony[2] are accorded importance by others.

Any so-called aetiological factor on its own will almost certainly not cause inversion. The author once tried to invert the uterus in order to over-stitch the bleeding sinuses in a patient with placenta praevia anaesthetized in the lithotomy position, when sinuses in the lower segment continued to bleed after delivery, and failed completely.

In the present patient the factors considered to be of major importance are, in order, the small size of the uterus, the lax widely-dilated cervix and, lastly, that traction was made on the placenta. The presence of placenta accreta probably increased the risk.

The uterus, with placenta attached, was estimated by direct comparison with the author's hand to be 9 cm. wide by 12 cm. long. This is considerably smaller than the measurements given by de Lee[7] (12×15 cm.) for the average postpartum uterus. It is of interest to note that at laparotomy the uterus had also been noted to be small and thin-walled. Visualize how much more easily this small thin-walled uterus could slide through the widely dilated cervix.

The rolling down and out of the right uterine wall supports the idea of a localized placental site relaxation[2] because the fundus itself was found on examination and checking to be firmly contracted. This rolling out might have been initiated by cord traction at the time of delivery, and before the uterus had a chance to retract.

This patient illustrates one point in particular with regard to treatment that is considered important. In spite of the huge blood loss occasioned by the removal of the placenta accreta, her condition improved immediately on reduction of the inversion. The inversion had caused the shock and it was reasoned that the removal of the cause of the shock was the best treatment.

Removal of the placenta caused excessive bleeding, but it is submitted that the bleeding would have been as much and the removal more incomplete, if attempts had been made to reduce the inversion with the placenta still attached.

SUMMARY

A case of acute complete puerperal inversion of the uterus is described. A distinctly small uterus is suggested as an aetiological factor of importance. The great value of immediate reduction of the inversion is noted.

I wish to thank Dr. K. Jooste for his calm competency during the anaesthetic.

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