PUERPERAL INVERSION OF THE UTERUS*

by

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Introduction

Acute inversion of the uterus is a catastrophy, which no obstetrician would like his patient to develop. Occurrence of acute inversion gives an impression of a badly managed labour, especially the third stage. Owing to rarity of its occurrence, it is rather unusual for an obstetrician to encounter many cases of acute inversion of the uterus in his individual practice. It is in an institution that one comes across more cases of inversion of the uterus, because of pooling of the cases. Five such cases were encountered at Nowrosjee Wadia Maternity Hospital, from January 1961 till 31st December 1966. During this period, there were about 57,000 viable confinements in this institution. Bell *et al* in 1953 reported 78 cases for the period following 1940. McCullough, in England, 1925, estimated that puerperal inversion occurred once in 30,000 instances.

Inversion of uterus is an entity, which was recognised as early as 2500 B.C. in Hindu system of medicine. Hippocrates noted it and described a method of correcting it by suspending the patient by feet, and manually replacing the uterus after applying oil to it. It was Soranus who, in the 2nd century, defined the condition and suggested that traction on the cord might be the responsible cause. In the 11th and 12th centuries A.D., Arabian physicians suggested that mismanagement in delivery of placenta might result in inversion of the uterus. Since the time of Pare, in the 16th century, uterine inversion has been clearly recognised as a pathologic entity. Thomas, in 1869, proposed an operation for the correction of the inversion with manual dilatation. Haultain described his operation in 1901.

Case I:

Mrs. A. G., 16 year old, para I, gravida I, was admitted on 3rd March 1961 at 1-0 a.m. to Nowrosjee Wadia Maternity Hospital. She had a normal vaginal delivery 2 hours ago in a private nursing home. There was no history of cord traction. The placenta separated 20 minutes after delivery.

On admission, the patient was in a collapsed state, her blood pressure being 90/60 mm. Hg., pulse 136 per minute. She was severely anaemic. Abdominal examination revealed uterus to be well contracted. The fundus was 3 cms. below the

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umbilicus. There was a well defined cup-shaped depression at the fundus. The uterus was tender to touch. The patient was treated for the shock by usual measures. Her pulse and blood pressure started settling with this treatment. The patient had a bout of bleeding. She was found to have second degree inversion, which very soon became complete.

Manual reposition of uterus was carried out under open ether anaesthesia. The inverted uterus was washed with saline, reposited manually into vagina and thereafter through the cervical rim with an abdominal sponge on a ring forceps. The uterus was packed with roller gauze. The pack was removed 24 hours later with pitocin drip going on. The patient was allowed to move about on the fourth day of reposition. She had an uneventful recovery thereafter.

Case 2:

Mrs. L. L., para V, gravida V, aged 28 years, was admitted on 23rd March 1964 at 11-45 a.m. She had a normal vaginal delivery outside at 9-30 p.m. on the previous day and had continued to bleed since then.

On admission, her pulse rate was 134 per minute and blood pressure 100/60 mm. Hg. Abdominal examination revealed that the uterus was flabby and the fundus was midway between umbilicus and pubic symphysis. On vaginal examination, a mass was found to be bulging through the cervical os. Diagnosis of inversion of the uterus was made.

In a very short time, during the period of examination, her blood pressure fell to 30 mm. Hg. She was immediately resuscitated and the uterus reposited under open ether anaesthesia. Post-operatively, the patient was noticed to be having icterus. Close interrogation revealed a history of anorexia, low temperature and mild jaundice for 10 days prior to labour. Five days later, the patient died of hepatic failure and cholaemia.

Case 3:

Mrs. K. was admitted with 9 months' amenorrhoea and labour pains. She had one full-term delivery. She gave history of severe pre-eclampsia then. After a trial with pitocin drip, delivery by Leff's rotation forceps followed by manual removal of placenta was carried out. There was postpartum haemorrhage. During puerperium, the patient had mild fever and tenderness in the left iliac fossa

The patient had a spontaneous vaginal delivery 6 hours after the onset of labour pains this time. The placenta failed to separate for about 30 minutes and complete inversion of uterus was detected. A forcible attempt to express out the placenta by the attending nurse might have been responsible for this inversion. The patient was in shock, in spite of there being no postpartum haemorrhage. The blood pressure never came above 50 mm. Hg. in spite of all resuscitative measures, hence the uterus was manually reposited into the vagina only. The patient expired within a short time.

Case 4:

Mrs. L. V., para III, aged 30 years was admitted on 25-1-1965 at 9-10 p.m. to Nowrosjee Wadia Maternity Hospital. She had previous normal deliveries. This time the patient had delivered at home at 7-30 p.m., was taken to a private institution in a collapsed condition and partially treated with sedation and an unsuccessful attempt at reposition. The complete inversion of uterus was partly reduced to second degree.

On examination, the patient was cold and clammy, there was marked pallor. The pulse rate was 160 per minute and blood pressure 60/? mm. Hg. On abdominal examination, fundal depression was detected. Manual reposition of the uterus was carried out under injection of morphia. Injection methergin was given and the uterus and the vagina were packed with roller gauze separately. Self-retaining catheter was put in. About 15 hours later, the pack was romoved under intravenous pentothal. She was given injection methergin before and after removal of pack. She had an uneventful recovery and was discharged on 14th post-partum day.

Case 5:

Mrs. L.B., aged 22 years, para II, with one full-term normal delivery at home was admitted on 23-9-1965 at 7.30 p.m. She

had a normal vaginal delivery at home on 23-9-1965 at 1-0 a.m. The placenta was retained for some time. Attempts to express the placenta ultimately succeeded. The patient had extra bleeding and she remained unconscious for some time.

The patient was referred by her family physician as a case of hypotension following post-partum haemorrhage. Her pulse rate on admission was 120 per minute and blood pressure 80/60 mm. Hg. Abdominal examination revealed uterus midway between umbilicus and pubic symphysis. On vaginal examination, the uterus was palpable in the vagina. There was a thin cervical rim palpable all around. The vagina was ballooned up with clots. Reduction of inversion was attempted by hydrostatic method. Failing this, manual reposition of uterus was carried out under open ether anaesthesia. During packing, it was noticed that the patient had cardiac arrest. After external cardiac massage, vasopressors and oxygen under pressure, the patient came around. The pack was removed after 15 hours. She had an uneventful recovery thereafter.

Discussion

Varying aetiological factors are mentioned by different workers. These include congenital malformations of the uterus, localised atony of the uterus in association with sudden rise in intra-abdominal pressure, asymmetrical uterine contractions, post-partum mismanagement of the third stage of labour, manual removal of adherent placenta, and fundal attachment of placenta. At times, acute inversion of uterus is recorded even in the absence of all these factors. In the 5 cases presented here, 4 had delivered outside. There was suspected mismanagement of the third stage of labour in the only patient, who delivered in this institution. Another patient had precipitate labour. Placenta did not remain attached to the uterus in any of the cases. Contrary to the belief, only one patient was a primiparous patient and the others multiparae. All the patients, except one, were in a state of shock. Post-partum haemorrhage was the presenting symptom in 2 cases.

Manual reposition of the uterus was carried out under anaesthesia or analgesia in all the cases. In one case only partial reposition was carried out. Difficulty in reduction of the inverted uterus was evident in all cases where the inversion of the uterus was of longer duration. In these cases, the cervix became oedematous and caused hindrance to the reduction of the uterus. Hydrostatic method was used only in one patient, where it failed. The failure was probably due to oedema and contraction of cervical ring as the inversion was of some hours' standing. None of the patients required operative procedure. Morbidity of the patient increased when the diagnosis of inversion of the uterus was delayed. One of the patients expired as a result of this complication.

It has been advocated that the treatment of shock should precede the treatment of inversion. If, however, the patient does not rally round in spite of usual resuscitative measures within a reasonable length of time, one should not hesitate in correcting the inversion. In these cases reposition of the inverted uterus might itself bring the patient out of shock, as it is the tension on the neurovascular bundle in the broad ligament which is responsible for the shock. In 4 cases, presented here, the uterus and vagina were packed after repositing the uterus. Ecbolics were also given

to all the patients once the inversion was reduced. In one of these cases, a sponge on ring forceps was used for further correction of the inverted uterus.

In the last case, the patient had cardiac arrest. Manipulation of the uterus when the patient was under light anaesthesia might have been the responsible cause. The patient however recovered without any after-effects of cardiac arrest. It is essential for this complete recovery that the patient should be diagnosed in time and treated promptly.

It is a controversy whether the adherent placenta associated with inverted uterus should be removed before or after reposition of the inverted uterus. However, in this series the placenta was not adherent in any of the cases.

Summary

(1) Five cases of acute inversion of uterus are presented.

(2) The incidence, aetiological factors and management adopted by various workers are also described.

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