



A RARE CASE OF UTERINE INVERSION

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ABSTRACT The puerperal uterine inversion is a rare and severe complication occurring in the third stage of labour. The mechanisms are not completely known. However, extrinsic factors such as oxytocic arrests after a prolonged labour, umbilical cord traction or abdominal expression are pointed. Other intrinsic factors such as primiparity, uterine hypotonia, various placental localizations, fundic myoma or short umbilical cord were also reported. The diagnosis of the uterine inversion is mainly supported by clinical symptoms. It is based on three elements: haemorrhage, shock and a strong pelvic pain. The immediate treatment of the uterine inversion is required. It is based on a medical reanimation associated with firstly a manual reduction then surgical treatment using various techniques. We report an observation of a 30 years old primigravida patient with an acute uterine inversion after delivery at a PHC.

KEYWORDS : uterine inversion puerperal, treatment, surgical techniques

INTRODUCTION:

The puerperal uterine inversion is a rare and severe complication occurring at the third stage of labour. Uterine inversion refers to the collapse of the fundus into the uterine cavity. Although it does not often occur, it carries a high risk of mortality due to hemorrhage and shock. In order to ensure a proper treatment, it has to be diagnosed in the early stages. We report a successfully treated case at the department of gynaecology obstetrics of Panjabrao Memorial Medical College, Amravati.

Case Report :

The patient is 30-years-old, primigravida. She delivered at PHC after a fast labour associated with abdominal expression and traction of the umbilical cord at delivery. The newborn is male of healthy weight. Within six hours and following the stage of expulsion, the parturient reported with excessive bleeding per vaginal and a painful vulvar mass. The general examination found a conscious and responsive to verbal commands patient. The blood pressure was 70 mmHg systolic, the heart rate was 106 beats/min and temperature at 38.6°, with respiratory rate of 20/minute.

On clinical examination; per abdominally Fundal height of 16 weeks was palpable, on per speculum examination multiple abrasions with a mass visualized, and on per vaginal examination: cervical rim felt above the mass in vagina. Reduction tried, but it wasn't possible due to the tight constriction ring. Various diagnoses were suggested. This included fibroma which was delivered by the canal, a uterine inversion or a prolapsus of the canal. The pelvic ultrasonography did not show a uterus in the pelvis and the diagnosis of acute uterine inversion was retained. Since the mass wasn't reducible, decision to perform exploratory laparotomy was taken. After preparation, broad-spectrum antibiotic therapy was given and 3 packed cell blood transfusions were administered. Under general anaesthesia, abdomen opened in layers, bladder identified by pulling round ligament. Ovarian ligament reduction wasn't possible, so incision on anterior wall of uterus taken. Cavity opened by fingers the uterus everted out. Anterior wall sutured up in layers. Hemostasis achieved. Uterus was atonic. Massage was given. Procedure was a success. Post op patient was stable and was discharged without any further complications.

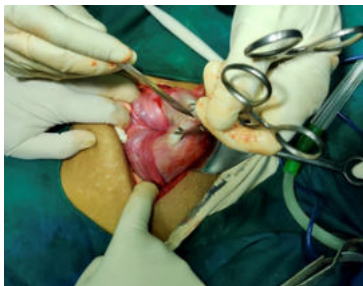


Figure 1

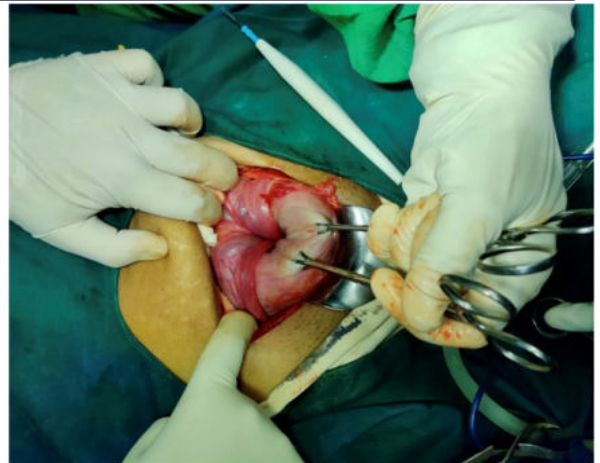


Figure 2

DISCUSSION :

The puerperal uterine inversion is a rare complication of the third stage of labour. It is defined as the turning of the uterus inside out, usually following childbirth. The frequency of this affliction is wildly varying in the reported literature. It depends on the country and the obstetric approach; it has been reported to be 1/20 000 in Europe and 1/2000 in the United States. Two classifications of uterine inversion are used.

The First Classification Is According To The Delay Between The Delivery And The Diagnosis Of The Uterine Inversion:

- The acute inversions arising immediately or within 24 hours after delivery.
- The subacute inversion occurring after the first 24 hours and within four weeks after delivery (like our patient).
- Finally the chronic inversion arising after more than four weeks after the delivery.

The prevalence of each class of inversion is 83.4%, 2.62% and 13.9% respectively.

The second classification is the most used. It is based on the anatomical severity of the inversion. It includes four stages:

- First Stage: the uterine base is in the uterine cavity and did not cross the cervix of the uterus
- Second stage: the uterine base crossed the cervix and passed in the vagina.
- Third stage: the uterine base is exteriorized at the vulva.
- Fourth stage: vaginal walls participate to the inversion.

Some reported papers merge the third and the fourth stages .

The causes of acute puerperal uterine inversion may be endogenous or exogenous. The endogenous causes include excessive extension of the uterine wall because of placenta accreta, coiling of the umbilical cord, excessively short umbilical cord, multiple pregnancy, exceptionally large fetus, and polyhydramnios; however, these causes are rare. However, most cases of acute puerperal uterine inversion are exogenous, and the condition is often caused by external forces, such as excessive cord traction in the third stage of labor, rough Crede placental expression, and manual detachment of the placenta. Because adhesion between the placenta and the uterus was observed, the uterine inversion in our present case was considered to be caused by placenta accreta. However, if uterine inversion is suspected, ultrasonography should be performed. If “upside down, inside out,” “pseudo-strip” and “target sign,” which indicate that the uterine fundus has dropped into the uterine cavity, are observed, a definitive diagnosis can easily be made. The diagnosis of the puerperal uterine inversion is mainly clinical. It is based on three elements: haemorrhage, shock and a strong pelvic pain. The haemorrhage strength is directly connected to the inversion duration. The bleeding is massive in more than 70% of cases and the shock is the most constant sign. It results from hypovolaemia which is secondary to bleeding and to vagal reaction associated to the stretching of the nervous fibres contained in uterine ligaments. The diagnosis of complete inversion is not difficult. It consists of visualizing the fleshy and bloody mass which is exteriorized by the vulva. The absence of the uterine base during the abdominal palpation confirms the diagnosis. However, the diagnosis is less straightforward in inversion cases of first and second stages.

With regard to the treatment of acute puerperal uterine inversion, methods to rapidly improve systemic shock and simultaneously reduce the inverted uterus should be performed first. Infusion, blood transfusion, antishock therapy, and antidisseminated intravascular coagulation therapy should be performed to improve the systemic conditions. Treatment of the puerperal uterine inversion is urgent. It is based on a medical correction of shock associated with a trial of manual reduction. In order to maximise the relaxation of the uterus before the reduction, a reported literature recommend using a neuromuscular relaxant molecules such as the magnesium sulphate. At present, nitrate based products are mostly used through intravenous injection since they allow a rapid relaxation of the cervix whenever the hemodynamic state allows. General anaesthesia is indicated when muscular relaxant drugs fail. The manual reduction is done either using simple method which consists of uterus desinvagination by starting from the center when the cervix is relaxed and from the boundary for a tight cervix. The Johnson process consists of pressuring the level of cervicovaginal cul-de-sacs using fingers and the base using the palm of the hand. In these last two techniques the hand is kept in the uterus for few minutes. The antibiotic therapy and uterotonic are recommended after desinvagination in order to avoid an immediate recurrence which was previously reported. Whenever the manual reduction approach fails, the surgical approach becomes imperative; and various techniques are suggested. The Huntington technique consisting of a desinvagination by progressive traction of the round ligaments, a third part assistance was obtained through vaginal canal. The Haultain technique is indicated in case of failure of the first one that might be by a cervix stricture. It consists of posterior median hysterotomy for avoiding the bladder, extending within 5 to 6 cm and reaching the cervical ring for achieving an easier desinvagination. The Spinelli method consisting of anterior median colpohysterotomy through the vaginal access allows removal of the cervical stricture. Finally, hysterectomy is indicated for a gangrenous or haemorrhagic uterus despite the reduction and medical treatment. This should be the final resolution. The risk of recurrence by a posterior delivery does not seem to be increased, but the uterus has to be considered as scared organ in case of anterior surgical reduction.

CONCLUSION:

The puerperal uterine inversion is a rare and severe pathology. Its diagnosis is essentially clinical. The treatment has to be immediate. This associates a medical reanimation and a rapid manual reinversion for avoiding invasive surgical approach. The prevention is essentially based on the eviction of extrinsic factors.

CONSENT:

Written informed consent was obtained from the patient for the publication of this case report and any accompanying images.

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