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CASE REPORT

Chronic Uterine Inversion Following Mid-Trimester Abortion

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About the Author

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Introduction

Uterine inversion during the postpartum period is a relatively rare but serious complication. It occurs as acute, chronic and subacute forms depending on time interval from delivery. In terms of onset of the inversion, acute describes the event occurring before cervical ring contraction. If the cervical ring has contracted, a subacute inversion has occurred. The inversion is classified as chronic if 4 weeks have elapsed after the event. Severe postpartum hemorrhage and shock result from the uterine inversion. If unrecognized, this obstetric emergency could cause serious morbidity or death. The reported incidence of uterine inversion varies considerably in the literature. Treatment options for this obstetric complication also vary from patient to patient and depend upon surgeon's familiarity with the procedure. Available options for correcting an inversion are hydrostatic as well as manual and surgical reposition with or without pharmacological agents (uterine relaxants). Here is a case report of complete chronic uterine inversion following spontaneous mid-trimester abortion.

Case Report

A 36-year-old P5A2 woman presented with complaints of lower abdominal pain and severe vaginal bleeding for one day with something coming down per vaginum few hours before. She had her last spontaneous abortion at 16 weeks 2 months back at home. She was not sure of placental delivery following expulsion of the fetus and never consulted any healthcare providers for postabortal condition. Since then she had mild lower abdominal pain and irregular

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bleeding. On general examination, she was cachexic, had profuse sweating, had profound anemia, had pulse rate 140 per minute, had blood pressure 80/30 mm of Hg, and was conscious but irritable. Abdominal examination revealed tenderness on deep palpation over suprapubic region. A large, globular, tender reddish purple mass with irregular surface having offending odor was found protruding through the introitus (Fig. 1). A friable cap-like mass attached to the protruding mass got detached during digital examination (Fig. 1, inset). Friability of the mass did not allow per vaginal examination. On digital rectal examination, fundus of uterus could not be felt. A diagnosis of postabortion uterine inversion with severe anemia was made. Laboratory evaluation revealed anemia (hemoglobin 5.5 grams/dl). Complete blood counts and renal and liver function tests were normal. She was posted for surgery under the cover of broad spectrum antibiotic and with 3 units of cross-matched blood.

Uterine reposition was planned along with resuscitative measures under anesthesia. Manual reposition was not considered due to friability of the tissue. Laparotomy showed classical flower vase appearance with tubes and ovarian and round ligaments in the crater of the inverted uterus (Fig. 2). Huntington's approach was attempted. Digital dilatation of the constricting cervical ring and stepwise traction on the funnel of the inverted uterus and the round ligament failed. The uterus could not be repositioned. Decision for Haultain's operation was made for reposition. Incision through the full thickness of constriction ring on the posterior uterine wall followed by traction on the round ligament for the replacement of uterus was successful. Total hysterectomy was done. The histopathological study of the detached tissue from the fundus showed chorionic villi with degeneration and necrosis. In the reported case, etiology of inversion of the uterus following an abortion may be because of a lack of muscle tone with adherent placenta. Perioperatively, she received four units of cross-matched blood. She had uneventful recovery.

Fig. 1 **a** Inverted uterus with placenta attached. **b** *Inset* The uterine surface of the detached placental tissue

Discussion

Inversion of uterus is referred to the turning of uterus inside out, where fundus prolapses inside the uterine, cavity, above or below the cervical os. Depending on time lapse from delivery, it can be classified in three types: acute (within 24 h of delivery), subacute (between 24 h and 1 month after delivery) and chronic (1 month after delivery). The incidence of uterine inversion is variable and is usually different for vaginal and for Cesarean delivery. Incidences range from approximately 1 in 2000 to 1 in 20,000 deliveries [1]. Since the introduction of active management of third stage of labor, incidence of puerperal inversion of uterus has become rare. Cord traction applied ostensibly before signs of placental separation increases the likelihood of uterine inversion [2–4]. Uterine inversion can be staged as follows [3]: Stage 1: the uterus is partially turned out. Stage 2: the fundus has passed through the cervix but not outside the vagina. Stage 3: the fundus is

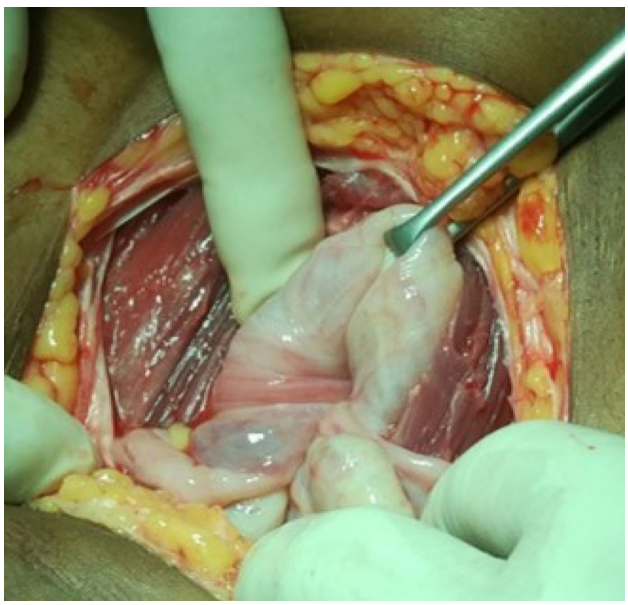

Fig. 2 Typical flower vase appearance

prolapsed outside the vagina. Stage 4: the uterus, cervix and vagina are completely turned inside out and are visible.

Many cases are associated with immediate life-threatening hemorrhage, and at least half require blood replacement. It was previously thought that associated shock was disproportionate to blood loss because of parasympathetic stimulation from stretching pelvic tissues. This has been refuted [3]. Majority of the acute cases revert back to normal position with non-surgical maneuver such as manual reposition or hydrostatic method in acute inversion due to high elasticity of uterus and its surrounding structures [3]. Chronic puerperal uterine inversion is rare and often associated with uterine pathologies such as uterine fibroid, polyp or malignancy. However, it can occur without any obvious pathology.

Though we see many reported cases of puerperal inversion following delivery, only a few cases of postabortal inversion have been reported [4]. Incomplete uterine inversion may get unnoticed or undetected due to less severe symptoms than complete acute uterine inversion [3]. This could be a cause for delayed presentation in our case of complete uterine inversion.

The etiology of uterine inversion is not known, but multiple contributory factors for puerperal inversion are known, such as multiparity, fundal pressure in second stage of labor, short umbilical cord, mismanaged third stage of labor [3].

Patients usually complain of lower abdominal pain, bleeding and mass protruding through vagina. Sometimes it can present as low backache, anemia symptoms or foul smelling vaginal discharge and shock. Management includes resuscitation and reposition of uterus or hysterectomy in resistant cases. Several surgical procedures are described to transect constricting cervical ring either from anterior or posterior route [3]. Division of constricting cervical ring anteriorly through vagina is used in Spinelli method which requires care of bladder and ureter, associated with more urinary and future pregnancy complication than posterior approach. Posterior division of cervical ring through abdominal route is used in Haultain's operation and through vaginal approach in Kustner's operation. Haultain's method allows better vision and precise incision of constriction ring, adequate hemostasis and suturing, thorough examination of other abdominopelvic structures and other suspension through same incision. Successful laparoscopic reduction in uterine inversion has been reported; however, its safety and efficacy is to be investigated before it can be recommended [2]. Chronic uterine inversion must be suspected as a differential diagnosis of the irregular bleeding per vagina following recent vaginal delivery or else it may not be detected till late puerperal period.

Conclusion

Uterine inversion can be a life-threatening obstetric complication. Although uncommon, if unrecognized, severe hemorrhage and shock will lead to maternal death. It can also follow an abortion. It is imperative that every physician providing obstetric care be aware of the common signs of inversion so that the diagnosis can be determined and treatment initiated immediately.

Compliance with Ethical Standards

Conflict of interest The corresponding Author Dr. Sujnanendra Mishra, certify that there is no actual or potential conflict of interest in relation to this article.

Ethical Statement Author certifies that he has no commercial associations (e.g., consultancies, stock ownership, equity interest, patent/licensing arrangements) that might pose a conflict of interest in connection with the submitted work.

References

1. Kawano H, Hasegawa J, Nakamura M, et al. Upside-down and inside-out signs in uterine inversion. J Clin Med Res. 2016;8(7):548–9.
2. Shepherd LJ, Shenassa H, Singh SS. Laparoscopic management of uterine inversion. J Minim Invasive Gynecol. 2010;17(2):255–7.
3. Cunningham FG, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, Casey BM, Sheffield JS. Williams obstetrics, 24th edn. New York: McGraw-Hill Education/Medical; 2014. pp. 787–8.
4. Sunitha RV. An unusual case of uterine inversion. J Clin Diagn Res. 2011;5(3):650–1.