

Acute Puerperal Uterine Inversion: Report Case

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Introduction

Uterine inversion is a potentially life-threatening complication of childbirth that occurs between one in 2148 and one in 6407 births. There is little published information on the pathophysiology or anesthetic management of this problem [1]. The cause of acute uterine inversion is usually reported as mismanagement of the third stage of labor, with premature traction on the umbilical cord and/or fundal pressure before the placenta has separated. Other factors that have been implicated include nulliparity; use of magnesium

sulfate during labour; manual removal of the placenta after vaginal delivery or at Caesarean section before complete placental separation [2].

Case Report

40-year-old parturient; four children alive vaginally with uterine prolapse as ATCDS admitted to the maternity ward for acute uterine inversion after vaginal delivery at home, (Figure 1).

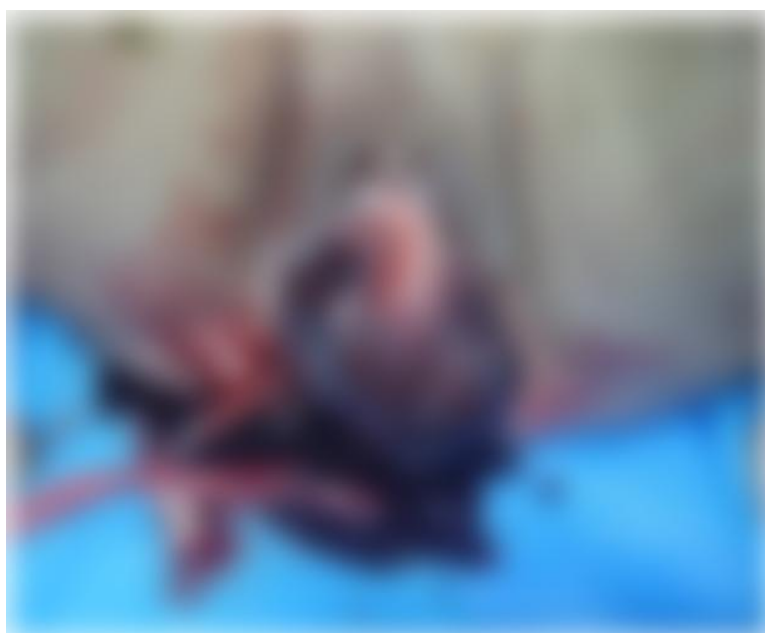


Figure 1: Uterine Inversion



Figure 2: Post Uterine Reversion

On general examination, the patient was hemodynamically, respiratory stable, on gynecological examination the uterus was completely inverted with the placenta still lying intrauterine, and the cervix looked normal, (**Figure 1**).

The patient underwent manual uterine reduction with artificial delivery; there was no evidence of placental abnormality such as placenta accreta and placement of three misoprostol tablets intrauterine; during monitoring the patient remained stable with a good uterine globe and minimal lochia, (**Figure 2**).

Discussion

Puerperal uterine inversion is due to displacement of the fundus of the uterus, usually occurring during the third stage of labor. It is classified as complete if the fundus passes through the cervix or incomplete if it remains above this level [3]. As a consequence of the low prevalence of associated factors regarding mother and/or child, factors in obstetric health care can be considered [4]. Das et al. described umbilical cord traction and improper method of expressing the placenta as the two main causes [after a spontaneous origin], representing 21 and 19% of all puerperal inversions. Up to that time, the majority of practitioners used traditional management of the third stage of labor, withholding an oxytocic drug until delivery of the placenta [5]. In the late 1980s, the practice changed to adopt active management of labor as the standard of care; an active management of the third stage consists of giving oxytocin 5 units intravenously or 10 units intramuscularly, with or soon after delivery of the

anterior shoulder. As a result, the uterus contracts rapidly, and, even if inappropriate cord traction and fundal pressure are used, it is not possible to invert the contracted uterus. William Hunter pointed this out more than two centuries ago: "A contracted uterus can be no more inverted than a stiff jackboot, but when it is soft and relaxed you may invert it, [6].

Management of uterine inversion consists of two important therapeutic interventions, to prevent severe blood loss or shock and revert as soon as possible. Shock treatment consists of oxygen, intravenous 0.9% NaCl administration and, if necessary, plasma or blood products. Successful repositioning can be reached by pushing the uterine fundus back through while applying pressure from the outside with the other hand (Johnson's maneuver) [7].

When repositioning is not possible due contraction, tocolytic drugs are sometimes needed. Nowadays, laparotomy is not needed for successful repositioning. All these procedures should be performed under general anesthesia in the operation room [8].

Every birth attendant should be able to detect this rare but severe complication. One should then proceed with adequate management as described to avoid the risk for acute severe maternal morbidity.

The main complication associated with uterine inversion is PPH; the high rates of PPH, blood transfusion, and need for general anesthesia, even in a fully equipped and staffed tertiary obstetric hospital, underline the high maternal risk in cases of acute uterine inversion. With active management of



the third stage of labor, and delivery of the placenta only after clear signs of separation, this condition should be largely preventable [9].

Conclusion

In summary, puerperal uterine inversion is a serious but infrequent complication of childbirth. Hemorrhage may be rapid and patients require aggressive resuscitation. The degree of blood loss is usually underestimated and the classical description of shock out of proportion to blood loss is probably due to this underestimation. Tocolysis may enable avoidance of general anesthesia, although this remains the treatment of choice if reduction is difficult, or the patient becomes severely hemodynamically compromised [10].

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