



ACUTE RECURRENT UTERINE INVERSION: A CASE REPORT

Obstetrics & Gynaecology

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ABSTRACT

Uterine inversion is a rare complication of third stage of labour. A potentially life-threatening emergency leading to maternal death. We present a rare case of 22-year-old primipara who had PPH with acute recurrent uterine inversion managed conservatively with insertion of Bakri balloon to prevent reinversion, which highlights another use of Bakri balloon apart from its use in atonic PPH

KEYWORDS

Recurrent postpartum uterine inversion, PPH, Bakri Balloon, Johnson's method

INTRODUCTION

Uterine inversion is a rare complication of third stage of labour. A potentially life-threatening emergency leading to maternal death. Incidence varies between 1 in 2000 to 1 in 50000 births¹. Recurrent uterine inversion is even rare with no reported incidence so far. It is the first known and reported case in our institute. Its low incidence and lack of studies makes obstetricians' experience regarding this condition scarce³.

Uterine inversion can be puerperal or non-puerperal. Degree of inversion varies according to the severity of inversion, delay between delivery and diagnosis of inversion². The complications are postpartum haemorrhage and shock is initially neurogenic, later it is hypovolemic. Early diagnosis of this complication is the only measure to prevent maternal mortality. We present a rare case of recurrent uterine inversion managed with placement of Bakri balloon.

Case Report

A 22-year-old primipara was referred from primary health center on immediate postnatal day of full-term vaginal delivery with corrected uterine inversion and severe anemia. She had delivered alive male baby with birth weight of 3.75 kg. Delivery was conducted by a Staff Nurse. After expulsion of placenta, PPH with acute uterine inversion noted. Manual reposition along with infusion of oxytocics (inj. Oxytocin 20 units infusion, 10 units IM with inj. methergine 0.2 mg IM) was done by the medical officer and referred to our hospital after catheterization for further management.

On admission, patient was in shock with tachycardia of 134 bpm, BP of 60/40 mmHg and urine output of 200ml. On abdominal examination fundus was palpable below umbilicus, uterus was well contracted. Her hemoglobin was 5.8gm/dl, platelet count of 66,000cells/cumm and Prothrombin time of 21s and INR of 1.5. She was resuscitated with IV fluids, 2 units PRBC and was started on inotropes. Patient was transferred to High dependency unit for close observation. After 7 hours patient complained of bleeding PV. On examination, pulse rate was 120 bpm, blood pressure was 80/60 mmHg, on PA examination fundus not made out clearly. This prompted a per speculum examination which showed fleshy endometrium in the vagina which was felt on prevaginal examination confirming reinversion. Ultrasound examination was done which showed the same.

Management

Patient was immediately transferred to OT. Under GA, repositioning of fundus was done bimanually in a controlled manner by Johnson's method. The uterus was hypotonic and flabby with increased propensity for reinversion. Therefore, additional measures were deemed necessary and a Bakri tamponade balloon catheter was inserted into the uterus and inflated with 350 ml of normal saline to help preserve the position of fundus. This was further confirmed by

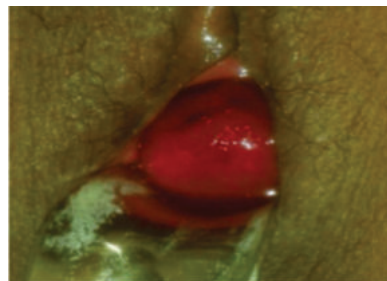
ultrasound examination. Bakri output was 20 ml post insertion

Patient was observed in OT for half an hour and was shifted to obstetric ICU, was monitored closely with higher antibiotics, inotropes support, and 2 units of PRBC, 2 units of FFP transfusion. She was hemodynamically stable with 24hour Bakri output of 200ml. Bakri balloon was removed after 24 hours. Further postnatal recovery was uneventful and patient was discharged on 7th postnatal day with oral hematinics. She was followed up at one and 6 weeks with uneventful recovery.

Examination images

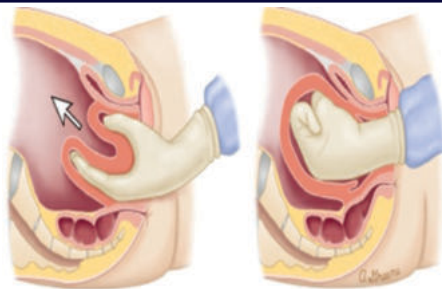
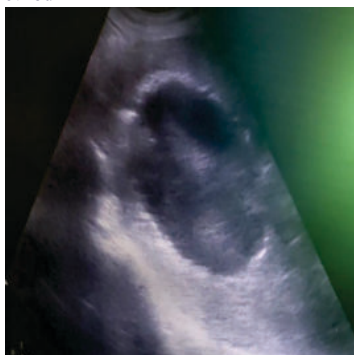


Photo credits – sent by a Medical officer who managed the case at primary health center



Per Speculum Examination



**Johnson's Method****USG After Bakri Balloon Insertion**

DISCUSSION

William Hunter once said "A contracted uterus can no more be inverted than a stiff jackboot, but when it is soft and relaxed, u may invert it."

Uterine inversion occurs when the uterine fundus prolapses within the endometrial cavity. It can be acute, subacute, or chronic. Acute inversion occurs within 24 hours of delivery, subacute between 24 hours to 4 weeks of delivery and chronic uterine inversion presents after 4 weeks of delivery or in non-pregnant state. Uterine inversion is sometimes described in degrees: First degree: incomplete inversion, Second degree: complete inversion in the vagina, Third degree: complete inversion outside the introitus. It is one of the classic hemorrhagic disasters encountered in obstetrics. Unless promptly diagnosed and managed appropriately, maternal morbidity can be significant. Risk factors can be single or multiple, and include fundal placental implantation, uterine atony, cord traction before placental separation, abnormally adherent placenta, and short umbilical cord. Management of uterine inversion should be stepwise comprising of non-surgical (Johnsons, O'Sullivan and Antonelli) and surgical

(Haultain incision, Huntington's procedure) approaches. Tocolysis has also been used in the past to facilitate replacement of inverted uterus with varying levels of success.

Rarely despite successful replacement of inverted uterus and administration of adequate oxytocics, acute inversion recurs. It presents a distinct risk of maternal death, particularly if facilities for anesthesia and replacement are not available.

Two recent proposed approaches are, one, to manually replace the inversion again and keep uterine fundus in place with insertion of an intrauterine balloon tamponade. Other is to manage and by laparotomy with Huntington operation and maintain uterine fundus in position with uterine compression sutures.

Whatever the method used for replacement, it is to be followed by uterotonics for 8-12 hours to prevent recurrence and broad-spectrum antibiotics to prevent puerperal sepsis.

The cause of uterine inversion in this case could likely be the mismanaged third stage of labour and the recurrence could be due to uterine atony.

Very few cases of recurrent puerperal inversion have been reported to date. The first reported successfully managed case was by Bakri balloon tamponade by Soleymani MH et al¹ in 2009, then by Elösegui JJH et al⁵ in 2011 and Gurung M et al in 2021². Kabir N et al⁶, Sharma N et al⁷ and Nambisan B⁸ described cases of recurrent uterine inversion

managed surgically by laparotomy f/b Huntington's method and uterine compression sutures.

CONCLUSION

Recurrence of uterine inversion is not only rare but even more challenging. Majority of such reported cases were managed surgically. Conservative management like uterine balloon tamponade can also be tried with surgical backup and can be successful in selective cases like ours.

Quick decision and active conservative intervention can tackle the situation effectively thus decreasing the morbidity that follows a surgical procedure.

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