

# Chronic Uterine Inversion Presenting as a Painless Vaginal Mass at 6 Months Post Partum: A Case Report

ERAM ALI<sup>1</sup>, MANISHA KUMAR<sup>2</sup>

## ABSTRACT

Uterine inversion is an abnormal protrusion of internal surface of relaxed uterus through the vaginal orifice. Its causes can be broadly classified as puerperal and non-puerperal with puerperal uterine inversion more common than non-puerperal uterine inversion. Acute inversions occurring immediately, or within 24 hours post-partum are the most common type. Chronic Uterine Inversions (CUI) occurring more than four weeks after the delivery are rare identities. Their differential diagnosis includes prolapsed fibroids and endometrial polyp. Chronic nature of these inversions makes the restoration of the normal position of the uterus per vaginal difficult contrary to acute inversions which can be repositioned more easily. We hereby present a case of 28-year-old lady who presented with a painless vaginal mass at 6 months post-partum. She was diagnosed as a case of CUI based on clinical and sonographic examination. Inverted uterus was successfully restored through per abdominal approach. The presentation of CUI as a painless vaginal mass at delayed post-partum period is rare and therefore reported.

**Keywords:** Abnormal protrusion Haultain's technique, Inverted uterus

## CASE REPORT

A 28-year-old P1L1 female six months post-partum presented to us with complaints of slowly increasing painless mass in the vagina over a period of two months with progressive difficulty in coitus. Patient had no abdominal complaints and had regular menstrual cycles with normal flow. Patient delivered a healthy female baby with birth weight 3.1 kg at home six months back. According to the patient, delivery was conducted by traditional birth attendant. There was prolonged third stage of labour. The traditional birth attendant removed the placenta after approximately one hour by cord traction. She denied any eventful antenatal and post natal course. Since last two months, ever since she became sexually active, she noticed a mass in the vagina causing difficulty in coitus. There was no history of weight loss, change in appetite, fever and foul smelling vaginal discharge. On local examination, she had normal external genitalia. No episiotomy scar or perineal tear was seen. On per speculum examination a 5cm x 6cm globular mass with smooth margins pinkish-red in colour was seen. Mass bled on touch [Table/Fig-1].

On per vaginal examination, a 5cm x 6cm mass, occupying the cervix and extending in the vagina was felt. Cervix was thinned out around the mass. Fundus of uterus was not palpable. Bilateral fornices were free. The discernible uterus was not palpable on rectovaginal examination.

The differential diagnosis of prolapsed fibroid uterine, endometrial polyp and chronic uterine inversion was made.

Ultrasonography was done which revealed hyperechoic mass in the vagina with a central hypoechoic H-shaped cavity in transverse images. Longitudinal images showed a U-shaped longitudinal groove from the fundus to the centre of the inverted part. With these ultrasonographic findings, a provisional diagnosis of Chronic Uterine Inversion was made and patient was planned for surgical repair. Keeping in mind the chronic nature of uterine inversion patient was taken up for laparotomy. On opening the abdomen classic flowerpot appearance of uterus was visible. Uterus was identified and fallopian tube and round ligament were seen going in the cup. Cervical ring was found too tight.

Huntington's method was tried by giving traction upward over the ring but failed. Finally Haultain's method was done by giving



**[Table/Fig-1]:** Inverted fundus of uterus seen at first visit of patient during per-speculum examination.



**[Table/Fig-2]:** Haultain's method- vertical incision posteriorly in the uterine wall over the cervical ring.



[Table/Fig-3]: Corrected inversion seen in per speculum examination.

vertical incision posteriorly in the uterine wall over the ring [Table/Fig-2] and replacement of uterus was done successfully by giving gentle traction upwards over the fundus by Alle's forceps. Uterine incision was closed in two layers and haemostasis was achieved. Postoperative per-speculum examination revealed normal anatomy [Table/Fig-3].

Patient was followed up after six weeks and she was asymptomatic. Contraceptive and birth spacing advices were given and she was also told that she will have to undergo elective lower segment caesarean section in her next pregnancy due to the Haultain's method of repair of CUI.

## DISCUSSION

Uterine inversion is a pathological stage of uterus in which the uterus turns inside out, through the cervix [1]. Uterine inversion presentation can vary from acute to chronic forms. The incidence of maternal mortality is about 15% in uncorrected cases [2]. Puerperal uterine inversion is a rare complication of mismanaged third stage of labour in which the uterus turns inside out through the cervix. Puerperal uterine inversion is more common than non-puerperal uterine inversion and its incidence varies from 1 in 2000 to 1 in 50,000 births [3]. Non-puerperal uterine inversion is an uncommon presentation seen often in association with leiomyoma, uterine sarcomas and endometrial carcinoma [4,5]. Puerperal uterine inversion is classified according to the delay between the delivery and the diagnosis of the uterine inversion as acute, sub-acute and chronic inversion with prevalence of 83.4%, 2.62% and 13.9% respectively [6].

Our patient presented with painless vaginal mass after six months of delivery which was found to be CUI. Multiple predisposing factors are known to cause uterine inversion. Puerperal risk factors for uterine inversion include mis-managed and prolonged third stage of labour, precipitate labour, uterine atony, premature cord traction prior to placental separation, placenta previa, adherent placenta, short umbilical cord and fetal macrosomia [7] where as non-puerperal risk factors include connective tissue disorders

like Marfan's, Ehler's-Danlos syndrome, large uterine fibroids and endometrial cancer [8].

Our patient only complained of coital difficulty but patient of CUI usually presents with vaginal discharge, irregular bleeding, history of postpartum haemorrhage or obstetric shock, low backache and chronic pelvic pain. Chronic uterine inversion is relatively uncommon and so far very few cases of chronic puerperal uterine inversion have been reported. Hsieh and Lee have described the sonographic findings of uterine inversion as hyperechoic mass in the vagina with a central hypoechoic H-shaped cavity is visualised [9]. However, only haemodynamically stable patients can undergo radiographic imaging if clinical examination fails to diagnose CUI.

The management of acute uterine inversion includes treatment of hypovolemic shock due to excessive bleeding. After resuscitation manual replacement of the inverted uterus through the vagina is attempted. Surgical intervention is usually necessary in chronic uterine inversions as the uterine walls have very little elasticity to be repositioned manually [10]. Haultain's abdominal operation and the two vaginal surgeries: Spinelli's and Kustner's techniques are the available surgeries for CUI. Reduced uterine incision, easy reposition due to traction on round and broad ligament and easy approximation and accurate suturing of uterine wall makes abdominal route as preferred option over the vaginal route [11]. Good pregnancy outcome is also reported with Haultain's method. Since our patient was 28-year-old with only one live issue we adopted Haultain's method for correction of CUI.

## CONCLUSION

Differential diagnosis of chronic uterine inversion should always be kept in mind even if patient present with asymptomatic vaginal mass after six months of delivery. Haultain's method of surgery is preferred over other method for correction of CUI and good pregnancy outcomes have been reported.

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### PARTICULARS OF CONTRIBUTORS:

1. Senior Resident, Department of Obstetrics and Gynaecology, Lady Hardinge Medical College, New Delhi, India.
2. Professor, Department of Obstetrics and Gynaecology, Lady Hardinge Medical College, New Delhi, India.

### NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Eram Ali,  
253, Jawahar Lal Society, Sector 5, Plot 9, Dwarka, New Delhi-110075, India.  
E-mail: eramali1987@gmail.com

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