

DOI: <http://dx.doi.org/10.18203/2320-1770.ijrcog20173521>

## Case Report

# Puerperal sub-acute uterine inversion: a rare case report

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**Received:** 12 June 2017

**Accepted:** 08 July 2017

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### ABSTRACT

Puerperal uterine inversion is a complication of third stage of labour, which can lead to maternal morbidity and mortality due to haemorrhage shock and infection. Early cases can be managed by manual reposition of uterus but neglected or late cases of uterine inversion are managed by Haultain's repair. Here we are presenting a case of subacute uterine inversion referred from peripheral hospital managed by Haultain's technique.

**Keywords:** Haultain's technique, Uterine inversion

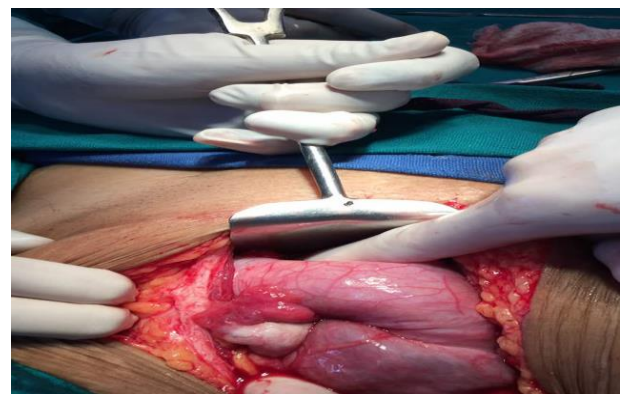
### INTRODUCTION

Uterine inversion is defined as 'the turning inside out of the fundus into the uterine cavity'. Puerperal uterine inversion is one of the most serious third stage complications, although rare but can be life threatening. Incidence ranges from 1:2000 to 1:50000.<sup>1</sup> Uterine inversion presentation can vary from acute to chronic forms. The incidence of maternal mortality is about 15% in uncorrected cases.<sup>2</sup> Multiple predisposing factors are known to cause uterine inversion. Puerperal risk factors for uterine inversion include mismanaged 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.<sup>3</sup>

### CASE REPORT

Patient was 29 years old P3L3 referred from peripheral hospital to our institution on 7th postpartal day after full term normal vaginal delivery with PPH with severe anaemia. The delivery was conducted by the trained birth attendant. There was history of prolonged third stage of labor and fundal pressure given intrapartum, placenta

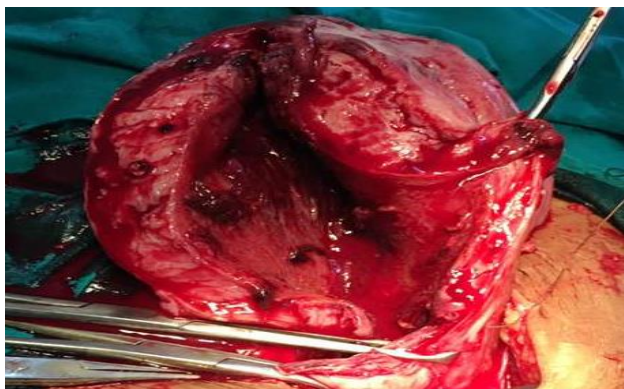
removed after 1 hour by forceful pulling of cord. Patient had post-partum hemorrhage associated with lower abdominal pain after placental removal which continued till she reached here. At the time of admission, patient was severely pale, dehydrated, sick looking; her pulse rate was 124/min, BP 90/58mmHg, temperature 100°F.



**Figure 1: Absence of uterus and inverted fundus as slit in abdominal cavity on laparotomy.**

On per abdomen examination, uterine fundus was not palpable and tenderness was present in the suprapubic

region. On per speculum examination, active bleeding was present. A grossly congested and hyperaemic mass with smooth surface was seen coming out of the os.



**Figure 2: Haultain's method- vertical incision given on the posterior uterine wall over the cervical ring.**

On per vaginal examination a soft, globular mass was felt coming from the cervix, up to the level of the introitus. Cervical ring was felt around the boggy mass. Fornices were shallow. All these findings confirmed the subacute complete uterine inversion. Investigations revealed Hb: 4.4gm%, Total WBC Count: 22,400/dl. RFT, LFT and coagulation profile was normal.



**Figure 3: Posterior wall of uterus after Haultain repair.**

Total 7 blood transfusions were given, IV antibiotics and antipyretics started. Patient shifted to major O.T. and first manual reposition of the uterus was tried under general anaesthesia but it was not successful. Thereafter, decision to perform laparotomy was taken. On laparotomy, Haultain's technique was followed by placing a longitudinal incision over the posterior wall of cervical ring and the uterus was repositioned by applying gentle upward traction with the help of two Allis forceps. The incision was repaired in two layers. Bilateral tubectomy was also done. Post-operative period was uneventful so patient discharged on 8th post-operative day in good condition.

## DISCUSSION

The puerperal uterine inversion is a rare complication of the third stage of labor, defined as the turning of the uterus inside out. The reported incidence of uterine inversion varies widely from 1 in 1584 deliveries to 1 in 20,000 deliveries.<sup>4</sup> 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.<sup>5</sup>

The classical clinical presentations include acute uterine inversion within 24 hours of delivery, subacute uterine inversion between 24 hours to 30th day postpartum and chronic uterine inversion after more than 30 days post-delivery. The absence of uterine fundus on per abdominal palpation and inability to visualize or palpate cervix on per vaginal examination suggest uterine inversion.<sup>6,7</sup>

Ultrasonographic features include hyperechoic mass in the vagina with a central hypoechoic H shaped cavity in the transverse image, while the longitudinal image shows a U shaped depressed groove from the fundus in the centre.<sup>8</sup> Treatment of acute uterine inversion involves immediate resuscitation, antibiotic therapy and uterine repositioning. Uterine repositioning can be achieved non-surgically by manual repositioning of the uterine fundus or hydrostatic reduction (O'sullivan method).<sup>9</sup> Failure of non-surgical uterine repositioning requires surgical repositioning or hysterectomy.<sup>10</sup>

Surgical intervention is usually necessary in chronic uterine inversions as the uterine walls have very little elasticity and have to be repositioned manually.<sup>11</sup> The available operations for the treatment of chronic inversion are Haultain's (cervical ring is posteriorly incised to facilitate uterine replacement by Huntington method) abdominal operation and the two vaginal surgeries: Spinelli's and Kustner's techniques.<sup>10</sup> Spinelli and Kustner operations involve replacing the uterine fundus through the anterior and posterior transections respectively.<sup>12</sup> 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.<sup>13</sup>

## CONCLUSION

Uterine inversion is a serious life-threatening condition, can lead to PPH, shock and maternal death. For prevention, Institutional deliveries should be encouraged, staff should be trained properly to conduct labor and to detect such condition earlier, WHO guidelines for management of third stage of labour should be followed, round the clock blood bank, emergency OT and anaesthetic facility should be present to save such patients.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: Not required*

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**Cite this article as:** Sharma R, Malhotra K, Dogra P, Kumar A, Kaushal S, Priya T. Puerperal sub-acute uterine inversion: a rare case report. *Int J Reprod Contracept Obstet Gynecol* 2017;6:3709-11.