



CHRONIC NON-PUERPERAL INVERSION OF UTERUS: A RARE ENTITY

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ABSTRACT

Uterine inversion is an uncommon condition and it usually occurs as a complication of delivery. Nonpuerperal inversion is further extremely rare. We report a case of 28 years old lady with chronic nonpuerperal inversion of the uterus due to fundal fibroid. Because of the rarity of condition, it is likely to be misdiagnosed with other conditions like uterine fibroid polyp, uterine sarcoma, uterovaginal prolapse and endometrial polyp. A high index of suspicion and usually MRI is required timely diagnosis and proper management.

KEYWORDS : Uterine inversion, Fibroid, Polyp, Nonpuerperal

Introduction

Uterine inversion refers to the descent of the uterine fundus through the cervix so that uterus is turned inside out. Uterine inversion is an uncommon condition and it usually occurs as a complication of delivery. The incidence is generally higher in developing countries where delivery services are scarce^{1,2}. Incidence reported in literature varies from 1 per 1,584 deliveries² to as few as 1 per 20,000 deliveries¹. Nonpuerperal inversion is further extremely rare representing about one-sixth of all inversion³. Due to its rare occurrence, most gynaecologist are unlikely to come across the case in their practice. Fundal fibroid is usually the most common inciting factor for non-puerperal inversion with few other reports of inversion associated with uterine neoplasm and endometrial polyps^{4,5,6}. We report a case of chronic nonpuerperal inversion of the uterus due to fundal fibroid with severe anaemia.

Case Report

We report a case of 28 years old, P2L2, lady with previous two vaginal deliveries who presented to our hospital with complaints of abdominal pain, heaviness lower abdomen, foul smelling vaginal discharge, and irregular and heavy bleeding since last 6 months. She had no bladder and bowel complaints. No other significant medical or surgical history was present. On examination, she had severe pallor and tachycardia. Abdomen was soft. On Per speculum examination, a large, polypoidal, congested, red, soft mass 7x 5 x 4 cm in size was seen in vagina, which was bleeding on touch. Cervical lips couldn't be seen (Fig. 1). On bimanual pelvic examination a large polypoidal mass of 7 cm x 5 cm was felt in vagina, with smooth surface and firm consistency. Cervical rim was felt all around. Imaging on ultrasonography and MRI was reported as : "inversion seen in the form of folding of anterior and posterior wall and fundus of uterus lies in cervical canal. Evidence of 4.4x4.4x3.8cms fibroid in relation to fundus of uterus causing distension of cervical canal. A final diagnosis of chronic uterine inversion with fundal fibroid was made and she was admitted for further investigations and management. Her haemoglobin was 6.9gm%. She was transfused 3 units of blood pre-operatively and taken for myomectomy with reposition of uterus. Vaginal technique (Kustner's method) was used. First of all pouch of Douglas was opened by giving transverse incision in posterior vaginal wall. A full length longitudinal incision was then performed through all the layers of uterus. The myoma was clearly visible after incision and myomectomy was performed. Anatomy was corrected and posterior uterine wall was stitched with interrupted sutures. After correction, cervical lips were clearly identified (Fig. 2). Posterior vaginal wall was stitched and pouch of Douglas was closed. Post operatively, patient recovered well and

was discharged on post operative day 4 in stable condition.

Discussion

Chronic non puerperal uterine inversion is a very rare condition⁷. Over 95% of non puerperal inversion are associated with tumors, of which 20% are malignant⁸.

Uterine inversion can be classified into four stages as: Stage 1: the fundus inverts but uterus still remains in the uterine cavity, Stage 2: complete inversion of the fundus through the cervix, Stage 3: the inverted fundus protrudes through vulva and Stage 4: inversion of the uterus and vaginal wall through the vulva⁹.

Expulsion of fibroid especially a sub mucous myoma of the fundus tends to be the most common cause^{9,10}. Other less common causes include endometrial polyps, uterine neoplasm like leiomyosarcoma, rhabdomyosarcoma or endometrial carcinoma etc^{9,10}.

The common presenting symptoms of chronic inversion are vaginal discharge, irregular vaginal bleeding, anaemia, backache, mass descending per vaginum etc¹¹. In this case, the patient presented with irregular vaginal bleeding, backache and severe anaemia (Hb <6 gm). Because of rarity of condition, the entity is likely to be misdiagnosed with other conditions like uterine fibroid polyp, uterine sarcoma, uterovaginal prolapse and endometrial polyp. A high index of suspicion is required by the gynaecologist and radiologist for timely diagnosis and proper management. Clinical diagnosis is usually difficult due to nonspecific findings and is often aided by imaging modality. Ultrasound is usually the first modality for diagnosing an inversion. Fundal indentation, a depressed longitudinal groove extending from the uterus to the center of the inverted fundus, hyperechoic fundus surrounded by a hypoechoic rim, are the signs usually seen on ultrasonography¹². However, it may not be possible to recognise the signs by USG in every case. Hence MRI is usually required, not only to make definitive diagnosis but also to study the relationship of uterus with surrounding structures. Signs indicative of uterine inversion on MRI are: U shaped uterine cavity and a thickened and inverted uterine fundus on a sagittal image and a "bull's-eye" configuration on an axial image¹². Surgical treatment of chronic uterine inversion has to be individualized depending upon patient's fertility, stage of inversion and associated pathology. Various approaches which include abdominal and vaginal methods have been described in literature to correct inversion^{11,13,14}. In our case since there was a fundal myoma and uterine inversion was complete hence we opted for a vaginal approach. And as the patient was young and desirous of fertility, we

performed a uterine sparing surgery. Vaginal myomectomy followed by correction of the inversion by Kustner's method was done. Spinelli's operations is the other vaginal procedure, described for correction of inversion^{9,11}. The two procedures are almost similar except the fact that in Spinelli's approach anterior pouch is opened and in Kustner's pouch of Douglas is opened for incising the cervical ring^{9,10}. Kustner's approach is preferred as there is increased risk of bladder injury in anterior approach. The abdominal procedures include Huntington's and Haultain's method^{13,14}. However still many a times it is not possible to perform uterine sparing surgery and hysterectomy has to be done.

Conclusion

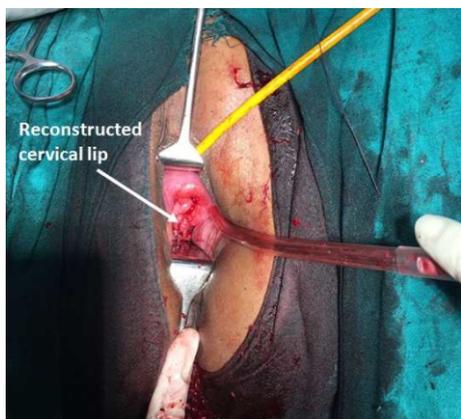
These rare types of cases may cause diagnostic and management challenges even to an experienced clinician especially in the incomplete type. A possibility of uterine inversion should be kept in mind if any lady presents with a big mass descending per vaginam. In case of any doubt MRI should be advised before planning surgery. Every aspect of surgery should be discussed with the patient including the need for hysterectomy. Biopsy of the mass should be sent for histopathology because although rare malignancy has been associated with inversion uterus.

Figure Legends

Fig. 1: Preoperative image showing complete uterine inversion



Fig. 2: Postoperative image showing corrected inversion with reformed cervical length



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