CASE REPORT

Non puerperal uterine inversion with fibroid polyp- a case report

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ABSTRACT

Non puerperal uterine inversion (NPUI) is a rare clinical problem. It is usually associated with a fundal submucous myoma extrusion. Less data is available about its incidence. Treatment depends on associated pathology and type of inversion. Diagnosis is challenging at times. Here we present a case of an acute NPUI with fundal fibroid who presented with bleeding, pain abdomen and mass protruding from vagina with infection. Diagnosis was made on clinical features, examination under anaesthesia and intra-operative findings. At first vaginal myomectomy was done followed by total abdominal hysterectomy after repositioning the uterus. Patient was discharged from hospital in good health without any complications.

Keywords: Uterine inversion, non puerperal, polyp, submucous myoma.

Acute on chronic or acute inversion of uterus (non puerperal) is rare and at most times associated with tumours. Diagnosis is often difficult and requires high index of suspicion; where fibroid polyp and third degree utero-vaginal (UV) prolapse are the initial diagnoses [1].

Uterine inversion refers to descent of uterine fundus through cervix so that uterus is turned inside out. NPUI is around 1/6 of all inversions [2]. Around 150 cases have been reported from 1887 till now. Takano et al [3] summarised 88 reported cases of NPUI, of which 92% were with uterine tumours and 20% of which were malignant. NPUI are frequent in African women [4].

Prolapsed fibroid is the most common inciting factor (78.8-85%); occasionally uterine neoplasm, sarcomas, endometrial polyp and UV prolapse may be the preceding factors. It occurs when uterus contracts to expel a myoma of fundal attachment.

Contributing factors proposed for uterine inversion are [5] -

1) Sudden emptying of uterus which was previously distended by a tumour.
2) Thinning of uterine walls due to intrauterine tumours (specially sarcomas) from its base and by pressure atrophy.
3) Dilatation of cervix.

Acute inversion is more dramatic and characterised by severe pain and bleeding; whereas chronic is

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insidious with irregular bleeding and vaginal discharge [6]. Clinically, recto-abdominal method is helpful; as the vagina is occupied by inverted uterus and on per rectal examination uterus is not felt in position and there is dimpling of uterine fundus. Treatment of this condition is also challenging. In this paper, we present a case of a 48years old woman who presented with acute NPUI secondary to a submucous fundal fibroid which got infected and necrosed and prolapsed.

Case report

A 48years old female, para 4, abortion 1, with history of menorrhagia for 1 year, menometrorrhagia and dysmenorrhoea for 6 months was admitted at Gauhati Medical College Hospital (GMCH) due to a mass coming out per vagina suddenly (like childbirth in patients words) with lower abdominal pain just 1 day before admission. She also had severe anaemia. She came with disturbed vitals with pulse rate (PR) of 120/min and blood pressure (BP) of 80/50mm Hg.

An irreducible firm, fleshy, foul smelling mass of size around 10x15 cm was seen coming out of introitus. Fingers could not be approximated above the mass. On per rectum (PR) examination uterus could not be palpated. No cervix could be palpated separately and it was suspected to be a case of complete inversion of uterus. .

She had 4 uncomplicated vaginal deliveries at home with 1 spontaneous abortion. Last child birth was 13 years back. She had no significant medical or surgical history.

Immediately after admission she was resuscitated with fluids and treated with intravenous (IV) antibiotics. Indwelling foley's catheter was inserted.

After admission her haemoglobin (Hb) level was 3.4gm/dl with mildly raised liver enzymes and serum creatinine of 1.28mg/dl. She was given 4 units of packed cells transfusion. Nephrology and gastroenterology consultation were taken and advice followed. After repeating the investigations within 10 days, her serum creatinine and liver enzymes level normalised and her Hb was 9.5 gm/dl. Her ultrasonography (USG) finding was inconclusive and she could not afford CT scan or MRI.

As the mass was infected and necrosis started, dressing was done twice daily with betadine solution and sulfasalazine ointment. Decision was taken to operate the case and she was operated after 13 days of admission after controlling infection. After giving anaesthesia, the mass was examined. Probe test was negative. It was confirmed to be a fibroid with inversion of uterus. Then abdomen was opened by an infraumbilical longitudinal incision. No uterus seen and fimbrial ends of tubes were seen above the ring. Then the diagnosis of complete inversion of uterus was confirmed.

Vaginal myomectomy was then carried out. Posterior wall of the uterus was incised and the uterus reposited in its anatomical position manually. Total abdominal hysterectomy was then carried out. No intra-operative complication occurred. Post operative period was uneventful and the patient was discharged on day 10 of operation.

Discussion

There are around 150 case reports of NPUI, of which 3% were infected. Most of the cases preceding factors are uterine myomas, sarcomas, endometrial polyp and UV prolapse [6, 7]. Symptoms of NPUI include bleeding per vagina, mass coming out per vagina, lower abdominal pain and urinary incontinence [8] and diagnosis can be made by - a) Clinical examination - mass coming out per vagina with negative probe test. Rectoabdominal method is helpful, b) USG- indentation of fundal area and depressed longitudinal groove from the uterus to centre of the inverted uterus may be seen. USG may show 'target sign' due to fluid within the space between inverted uterus and vaginal wall [9], c) MRI - a 'U' - shaped uterine cavity and a thickened and inverted uterine fundus on a saggital image and a Bull's eye configuration on an axial image may be seen. T2-weighted MRI is suggested to be of more importance [10], d) Demonstration of endometrium on surface of

mass will confirm the diagnosis, e) Biopsy of mass has definite place if associated malignancy is suspected.

In treatment the following surgical methods have been described.

a) Hungtington abdominal approach - the round ligament and uterus are grasped below the area of inversion and slowly pulled up repeatedly till the uterus is reinverted [11].

b) Haultain abdominal approach- vagino cervical ring is incised posteriorly and carried up the posterior wall of uterus until it can be re-inverted [12].

c) Kustner's vaginal approach- POD is entered vaginally. The posterior aspect of uterus and cervix is split and uterus is gradually re-inverted [13].

d) Spinelli's vaginal approach- incision is made on anterior aspect of cervix; bladder separated and then uterus is re-inverted [13, 14].

e) In presence of myomas, vaginal myomectomy has to be done first, which makes the hysterectomy feasible and easier [15].

f) Auber et al described a case of NPUI treated by combined laparoscopic and vaginal approach [16].

g) Fertility sparing surgeries can also be done in younger patients by abdominal, vaginal or combined approach.

h) Manual repositioning was described by Johnson [17] and is possible with acute inversion. Saline hydrostatic pressure positioning was also described by O'Sullivan and modified by Oguey and Ayida [18].

Conclusion

NPUI is an uncommon entity and is difficult to manage. A little more than 150 cases have been reported. Suspicion from clinical features followed by USG and MRI leads to its diagnosis. However definite diagnosis is sometimes made by examination under anaesthesia or by intra operative findings. Its treatment is surgical (abdominal or vaginal). In cases of leiomyomas, myomectomy helps to relieve traction and at least partially reposition the uterus which makes hysterectomy much easier. Prognosis is good, which however depends on initial diagnosis, stage and associated pathology. Need for fertility preservation and excluding malignancy might be important in selected cases.

Conflict of interest: None. **Disclaimer:** Nil.

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