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Case Report

Non-puerperal uterine inversion: a case report

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ABSTRACT

Non-puerperal uterine inversion is rare. A 42-year old multiparous woman presented with lower abdominal pain, offensive vaginal discharge, heavy menstrual bleeding and a huge protruding mass per vaginum. Clinical examination revealed an inverted uterus, cervix and vagina with a large submucosal fundal fibroid. A diagnosis of non-puerperal uterine inversion and severe anaemia was made. After anaemia correction by blood component transfusion, she successfully underwent vaginal correction followed immediately by hysterectomy by abdominal route. Post- operative period was uneventful and she was discharged in good condition. Histopathology confirmed the diagnosis of leiomyoma. The aim was to highlight a rare condition of chronic non-puerperal uterine inversion following the extrusion of a benign fundally located submucous uterine myoma. A high index of suspicion is required to make a prompt diagnosis.

Keywords: Uterine inversion, Non-puerperal, Sub-mucous myoma, Spinelli's method, Hysterectomy

INTRODUCTION

Chronic uterine inversion is defined as acute inversion which has been present for at least 4-weeks after delivery and which has resisted the standard methods for reposition.[1] It may follow puerperal or obstetric cases which have been overlooked, or those associated with gynaecologic cause, like the extrusion of tumours of the uterine fundus. It is a very rare condition and an incidence of 1 in 8500 has been reported in resource-poor countries1. Non-puerperal uterine inversion has been described as a rare occurrence by several authors but how really rare is it has not been defined.[1-5] However, the fact that many gynaecologists might not see any in their entire practice gives a clue as to its infrequent nature. Surgical procedures described in the literature use different techniques to first reposition the uterus followed by hysterectomy. However, repositioning the uterus is not always successful. Surgery for inverted uterus is technically difficult due to close proximity of the ureters to the ovarian and uterine vessels due to traction on the vascular pedicles, difficulty in repositioning the uterus and constraints of mobilizing the bladder down due to the inverted uterus.

We present a case of chronic non-puerperal uterine inversion due to a benign submucous fundal uterine myoma in a 42 year old multiparous woman who had correction of anaemia and subsequent surgery.

CASE REPORT

Mrs. MR, a 42 year old multiparous woman was admitted into the Gynecology ward through the casualty out-patient clinic. She was referred from a general hospital with a 6-month history of excessive menstrual flow, severe dysmenorrhoea and intermenstrual bleeding. Two months prior to presentation, she felt a fullness sensation in her vagina and thereafter she noticed a mass protruding through the vagina. The mass was irreducible and bled easily. There was a history of passage of foul smelling whitish-brown vaginal discharge and she had difficulty in having coitus. She also had difficulty in both walking and sitting down. There was history of dizziness, dyspnoea on

mild exertion and easy fatigability. There were no abnormal protrusions elsewhere on the body and she had no history of chronic cough or constipation. She had no history of abdominal surgery. She attained menarche at the age 14 years and menstruated for 4 days in a regular cycle of 35 days. Her last normal menses was two weeks prior to presentation. She had no history of menorrhagia or dysmenorrhoea before the onset of her illness. She had no knowledge of contraceptives and had not used any method. All her pregnancies were not supervised and the deliveries were at home and were conducted by traditional birth attendants (TBAs). Her last birth was 16 years prior to presentation. She got married at the age of 12 years. She was not a known diabetic or hypertensive patient.

On examination, she was poorly-nourished, dehydrated and pale. No significant findings on other systems. On vaginal examination, a large offensive necrotic mass attached to a smooth surfaced globular mass was seen with the broadest leading part measured 20x10x6 cm (Figure 1a). The surface of the mass appeared hemorrhagic, edematous and had a shaggy look. No opening could be seen in the leading part of mass. There was no active bleeding at that time. On palpation the mass felt firm and bled on touch. Vagina was completely inverted out, cervix could not be felt and the mass was found to be irreducible. Cervical os could not be identified (Figure 1b). Uterine sound could not be passed. On rectal examination, uterus could not be felt; rather a vacuum was felt anteriorly. Haemoglobin level was 4.5 g/dl so three units of cross-matched blood was transfused.

Figure 1a: Mass per vagina.

Figure 1b: Undersurface of the vaginal mass.

Transabdominal ultrasound could not identify uterus in its normal position in pelvis. A provisional diagnosis of chronic uterine inversion with submucosal fundal myoma was made and the patient was prepared for surgery. Continuous bladder drainage with Foleys catheter and broad spectrum intravenous antibiotics was started. Blood transfusion was done to improve her anaemic status preoperatively. Local dressing using the antiseptic solution of povidone iodine and hygroscopic action of magnesium sulphate was done daily. Intravenous pyelography was done preoperatively to trace the course of ureter.

The patient counselled and for surgery and consent taken. She underwent reduction of the inversion and total abdominal hysterectomy under general anaesthesia. The patient was placed in the modified (low) lithotomy position to facilitate an abdomino-vaginal procedure. The intra operative findings were complete uterine inversion with a fundally-located submucous myoma (25x10x6 cm), normal vaginal mucosa and a haemorrhagic uterine endometrium. The ovaries, fallopian tubes and urinary bladder were grossly normal.

Figure 2: Pre-operative finding.

Figure 3: Enucleation of myoma.

Figure 4: Aperture of the anterior peritoneum.

Figure 5: Final image after vaginal hysterectomy.

The uterine inversion was corrected using the Spinelli's method. Myomectomy was performed. Haemostasis was secured. An attempt to return the fundus to the abdominal cavity through the cervico-vaginal junction was met with difficulty. It was then resolved to proceed per abdomen to replace it. Laparotomy was then performed and the uterine fundus was re-positioned by bilateral traction on the round ligaments. Total abdominal hysterectomy was performed. Haemostasis was secured. The patient was shifted to the ward in satisfactory condition.

Figure 6: Enucleated myoma

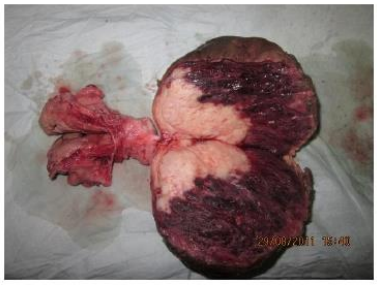

Figure 7: Gross specimen after surgery showing myoma and uterus.

The post-operative period was uneventful. Histology of the surgical specimen revealed a leiomyoma. She was discharged home on the 8th post-operative day. Follow-up was done on the 15th post operative day and then after a month in the out patient. She was asymptomatic.

DISCUSSION

Non-puerperal uterine inversion is usually precipitated by tumors sited at the fundus of the uterus which exert traction force to cause the inversion, although some cases have been reported with no association with tumors.

Chronic non-puerperal uterine inversion affects mostly women with intrauterine tumour like submucosal leiomyoma while other causes are leiomyosarcoma, endometrial carcinoma, rhabdomyosarcoma, malignant mixed mullerian tumour and endometrial stromal carcinoma.[6]

The major factors that contribute to its occurrence are: tumor attachment site, thickness of the tumor pedicle, tumor size, thin uterine wall and dilatation of the cervix.[5]

Takano et al on the other hand report 92% association with tumors out of which 63/88 (71.6%) were leiomyomas and equally 20% malignant tumors.[12] This condition is very rare, accounting for only one sixth of all cases of uterine inversion.[7]. Usually, the cases of non-puerperal uterine inversion present after 45y; are mostly related to benign myomas and rarely associated with malignancies 8. Only few cases of non-puerperal inversions have been reported in young women and in most cases the aetiology is attributed to malignancy.[6,9]

The need to conduct histopathology studies on all samples cannot be over emphasized.

Non-puerperal uterine inversion can also be classified into acute and chronic based on the onset and evolution. The acute is more dramatic and characterized by severe pain and hemorrhage whereas the chronic is insidious and characterized by pelvic discomfort, vaginal discharge, irregular vaginal bleeding and anemia.

The diagnosis is said to be difficult and requires high index of suspicion especially when the inversion is partial.

Lewin et al. recommend the use of T2-weighted MRI scans to detect a U-shaped uterine cavity, thickened and inverted uterine fundus on a sagittal image and a ‘bulls-eye’ configuration on an axial image as indicative signs of uterine inversion.[10] This however, is not readily available in most hospital settings in developing countries.

Reposition procedures like that of Johnson are more likely to be successful in acute inversion but in chronic cases, surgery is imperative. Depending on the patient’s reproductive desire and associated conditions, surgical reposition or hysterectomy could be considered. Spinell and Kustner are similar trans-vaginal surgical reposition techniques with the basic differences being that Spinell's approach is anterior and requires dissection of the bladder and has uterine incision on anterior wall while Kustner's is posterior approach with incision on the posterior uterine wall,[4] which makes it a bit easier and safer. Kustner procedure includes entering the pouch of Douglas vaginally and splitting the posterior aspect of the uterus and cervix and finally re-inverting the uterus where as in Spinelli’s method incision is given in anterior aspect of cervix and uterus is reinverted.[11] Abdominal approaches include Huntington’s and Haultain.

Where fertility is wished, the uterine incision is repaired through abdominal approach otherwise routine vaginal hysterectomy can be performed. Malignant tumors may be present in case of non-puerperal uterine inversion as reported by Takano et al., showing 92% association with tumours out of which 71.6% were leiomyomas and 20% malignant tumours.[12] Thus, a high index of suspicion should be maintained.

CONCLUSION

The cases of non-puerperal uterine inversion are uncommon and are difficult to manage even for an experienced gynecologist. High index of suspicion for the diagnosis and clear knowledge about gynecological surgery will permit a successful outcome. Most surgeons use the abdominal route for hysterectomy. With some basic skills of the reposition techniques, vaginal hysterectomy could be carried out briskly and safely.

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REFERENCE

1. Rosales Aujang E, Gonzales Romo R. Non-puerperal uterine inversion. Gynecol obstet Mex. 2005;73:328–31.
2. Lai FM, Tseng P. Non-puerperal uterine inversion: a case report. Singapore Med J. 1993;34:466–8.
3. Eigbefoh JO, Okogbenin SA, Omorogbe F, Mabayoje PS. Chronic uterine inversion secondary to submucous fibroid: a case report. Niger J Clin Pract. 2009;12(1):106–7.
4. Safdarian L, Aleyassin A, Forootan M, Kamalian N, Ahmadzadeh A. Non puerperal uterine inversion: a case report. Acta Medica Iranica. 2003;41(1):59–61.
5. Lascarides E, Cohen M. Surgical management of non-puerperal inversion of the uterus. Obstet Gynecol. 1968;32:376–81.
6. De Vries M, Perquin DAM. Non-puerperal uterine inversion due to submucous myoma in a young woman: a case report. Journal of Medical Case Reports. 2010;4:21.
7. Krenning RA. Nonpuerperal uterine inversion. Review of literature. Clin Exp Obstet Gynecol. 1982;9:12–5.
8. Gomez-Lobo V, Burch W, Khanna PC. Non-puerperal uterine inversion associated with an immature teratoma of the uterus in an adolescent. Obstet Gynecol. 2007;110:491–93.
9. Lupovitch A, England ER, Chen R. Non-puerperal uterine inversion in association with uterine sarcoma; case report in a 26-year-old and review of the literature. Gynecol Oncol. 2005;97(3):938–41.
10. Lewin JS, Bryan PJ. MR imaging of uterine inversion. J comput Assist Tomogr. 1989;13:357–59.
11. Fofie C, Baffoe P. Non puerperal uterine inversion: A case report. Ghana Med J. 2010;44:79–81.
12. Takano K, Ichikawa Y, Tsunoda H, Nishida M. Uterine inversion caused by Uterine Sarcoma: A Case Report. Jpn J Clin Oncol. 2001;31(1):39–42.

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