Chronic non puerperal uterine inversion secondary to sub-mucosal fibroid

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Abstract

Inversion of uterus is a rare clinical condition, if not associated with puerperium or third stage of labour. Non-puerperal uterine inversion usually results secondary to tumour implanted at fundus of the uterus. An unusual case of non-puerperal uterine inversion caused by a large submucosal fundal fibroid is reported where a 39-year-old woman presented with heavy bleeding per vaginum and profuse vaginal discharge.

Uterine inversion was corrected abdominally by Haultain's procedure after vaginal myomectomy followed by abdominal hysterectomy. Both the ovaries were conserved.

Keywords: Uterine inversion, Non puerperal, Fibroid.

Introduction

Uterine inversion is described as part of the uterus indenting towards and eventually prolapsed through the dilated cervix resulting in uterus being turned inside out. Uterine inversion is categorized as puerperal or obstetric and non puerperal or gynaecological complication. Puerperal uterine inversion occurs as obstetrical emergency due to the mismanaged third stage of labour. Non puerperal inversion of uterus is an exceptional condition secondary to intrauterine pathology like polyps and leiomyoma with fundal attachments.[1] Contributing factors responsible for uterine inversion include thinning of the uterine walls from the base of the tumour and pressure atrophy, sudden emptying of the uterus which was previously distended by a tumour, and dilatation of the cervix. Common clinical features of non puerperal inversion are chronic vaginal discharge and anaemia due to heavy irregular uterine bleeding. Some may also present with voiding difficulties and lower abdominal heaviness. The recto abdominal method is often the most diagnostic clinical method , as the vagina is occupied by the inverted uterus and on bimanual palpation there is dimpling of uterine fundus. Treatment depends on the stage of the inversion and associated pathology.

Case Report

A 39 years old lady with history of five successful vaginal deliveries and the last born nine years ago presented at Kulsoom Bai Valika Site Hosptial, Karachi, with the following complaints: continuous bleeding per vaginum for the past one month, profuse vaginal discharge followed by voiding difficulties and associated with heaviness of lower abdomen and lethargy since 15 days. She also had irregular uterine bleeding for the last 3 years for which she did not take any medical advice. There were no medical or surgical co-morbids.

On general examination she was found to be lethargic and severely anaemic with 4.5gm% haemoglobin. Abdomen was tender on palpation. On pelvic examination a firm, fragile, haemorrhagic mass about 7x6cm was found occupying the vagina and cervix, which could not be felt separately.

Pelvic sonography showed enlarged distorted uterus with solid mass of about 8.6x6.3 cm occupying the lower uterine segment and cervical region extending down into the vagina, most likely fibroid. Ovaries were unremarkable.

Her anaemia was corrected by transfusing four units of blood and vaginal myomectomy was planned on probable diagnosis of fibroid polyp (Figure-1) with suspicion of uterine inversion under intravenous

Figure-1: Fibroid protruding through vagina.

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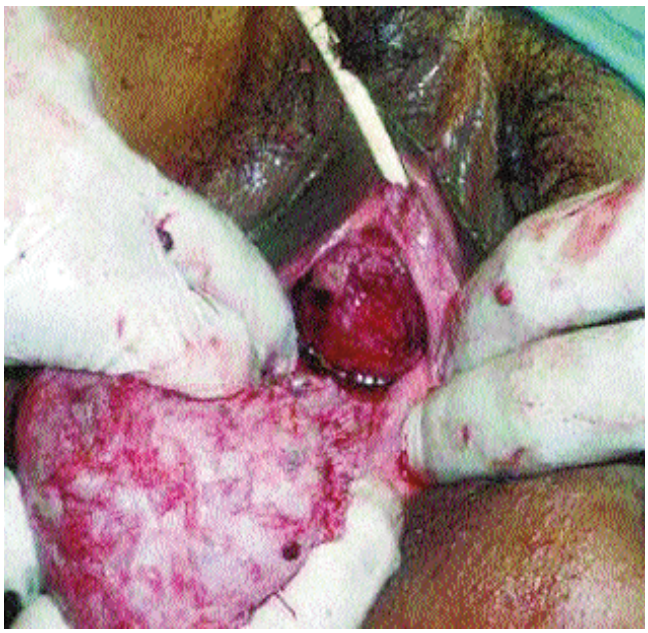

Figure-2: Fibroid removed vaginally and inverted uterus seen within vagina.

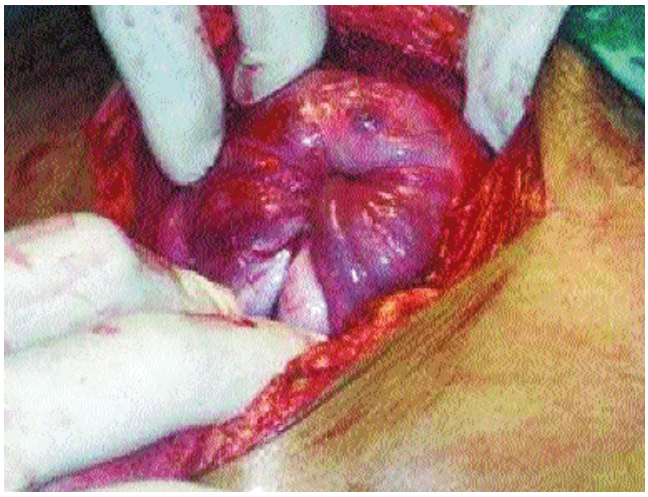

Figure-3: Uterine inversion with broad ligament within the depression.

antibiotic cover.

Under spinal anaesthesia, fibroid was removed vaginally (Figure-2) then the abdomen opened by pfannenstiel incision. Diagnosis of uterine inversion was confirmed with both round ligament seen within the depression (Figure-3). Inversion was corrected by giving incision on anterior uterine wall (Figure-4) and total abdominal hysterectomy was performed with conservation of both ovaries.

The postoperative period was unremarkable. She was given antibiotic cover and was discharged on fifth postoperative day in stable condition. Histological examination of the specimen confirmed benign leiomyoma with necrosis.

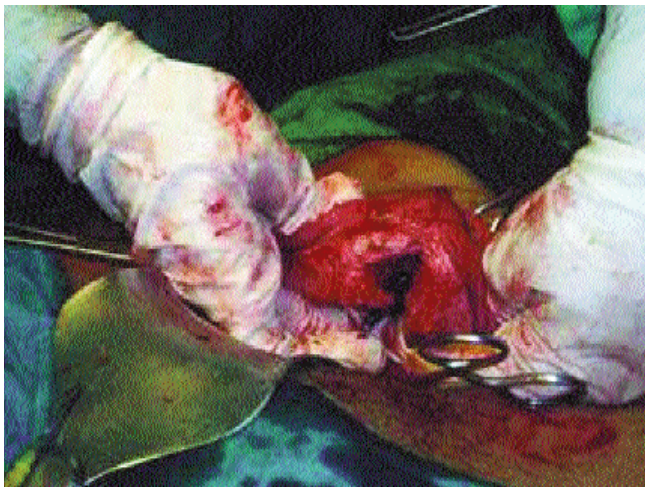

Figure-4: Incision on anterior uterine wall.

Discussion

Non puerperal uterine inversion is a rare clinical situation as many gynaecologists may not have seen such a case in their entire practice, so it is a diagnostic dilemma and treatment challenge for them.[2]

There are no figures on the incidence of it in the literature. 150 cases of non-puerperal uterine inversions were documented from 1887 to 2006 by Gomez-Lobo et al.[3] Mwinyoglee et al. reported that 97.4% of uterine inversions are associated with tumours, out of which 20% were malignant,[4] while Takano et al. reported that 71.6% cases of uterine inversion were associated with leiomyoma.[5]

Based on the degree of inversion, some authors describe four distinct stages[5] as follows:[6]

Stage-1: Inversion of the uterus is intrauterine or incomplete. The fundus remains within the cavity.

Stage-2: Complete inversion of the uterine fundus through the fibro muscular cervix.

Stage-3: Total inversion, whereby the fundus protrudes through the vulva.

Stage-4: The vagina is also involved with complete inversion through the vulva along with an inverted uterus.[7]

Due to its insidious onset and rare occurrence the clinical

diagnosis of chronic uterine inversion is difficult, specially if inversion is incomplete. Its diagnosis requires a high index of suspicion when tumour is palpable in vagina or seen out of introitus and uterine fundus is not palpable on bimanual examination, Magnetic Resonance Imaging (MRI) is also helpful in the diagnosis. "U" shaped uterine cavity, a thickened and inverted uterine fundus on sagittal section, and a "bull's eye" configuration on an axial image are the described MRI findings of uterine inversion.[8]

Surgical treatment of chronic uterine inversion depends upon patient's fertility, stage of inversion and associated pathology. Many abdominal and vaginal surgical approaches have been described to correct inversion. Spinell and Kustner[9] 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 an anterior uterine wall incision, while Kustner's is a posterior approach with incision on the posterior uterine wall, which makes it a bit easier and safer.[9] Surgical repositioning can also be done through laparotomy using the Huntington procedure, holding the round ligaments and the uterus below the area of inversion and slowly pulling up repeatedly until the uterus is reinverted. Haultain's procedure uses a vertical incision in the posterior portion of the ring with gentle traction on the round ligaments.[10] In our case, vaginal removal of the tumour was attempted followed by Johnson's method to correct the inversion which was unsuccessful. Laparotomy had to be performed using an anterior vertical incision on the uterine wall which was followed by a total abdominal hysterectomy.

Conclusion

Chronic non-puerperal uterine inversion is an unusual condition but can occur in premenopausal age. Clinical diagnosis of this is often not easy and sometimes this situation can prove to be fatal. A high index of suspicion is necessary for diagnosis when a large prolapsed fibroid is encountered. As the uterus per se may not be palpable on examination or appear concave on bimanual examination or during laparotomy. Uterine inversion has a good outcome if diagnosed and managed timely. Repositioning of uterus may not be possible in all cases, leaving hysterectomy as the only option. This case in many respects is instructive.

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