

Non Puerperal Uterine Inversion Secondary to Submucosal Fibroid: A Case Report

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ABSTRACT

Non Puerperal Uterine Inversion (NPUI) is a very uncommon condition. The incidence of puerperal uterine inversion make an estimate of 1/30,000 deliveries and NPUI approximately 17% of all uterine inversion. The most common cause which leads to uterine inversion is a submucous myoma attached to the fundus but diagnosis can be difficult to make. The management of uterine inversion is always challenging for a surgeon. In the present case a 38-year-old woman, presented with significant anaemia because of menorrhagia. She used to feel mass occasionally into the vaginal canal which never comes out of the introitus, the mass was elucidated as a fibroid polyp. On investigation, her haemoglobin was 6.6 gm%, with continuous bleeding per vaginum, patient was transfused with three units packed red blood cells and planned for surgery. A diagnosis of incomplete uterine inversion secondary to a submucous fibroid was made at exploratory laparotomy. Total abdominal hysterectomy, right salpingectomy with left salpingo-oophorectomy was performed. The patient was discharged under satisfactory condition.

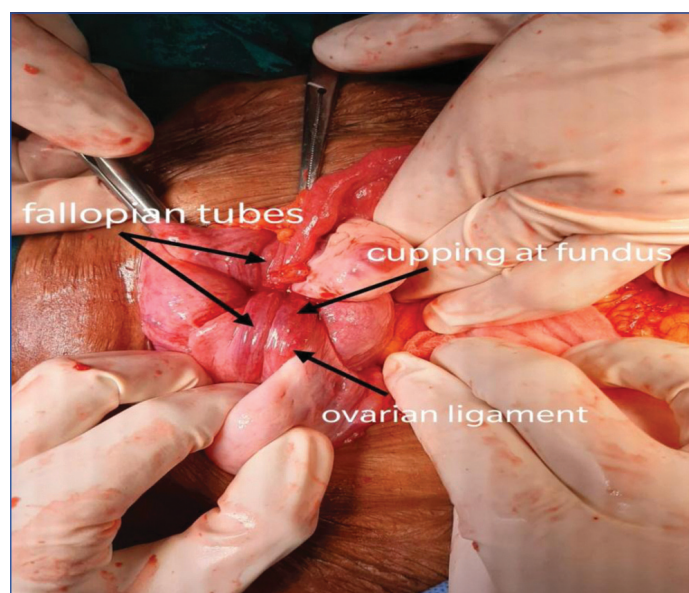
Keywords: Salpingectomy, Salpingo-oophorectomy, Total abdominal hysterectomy

CASE REPORT

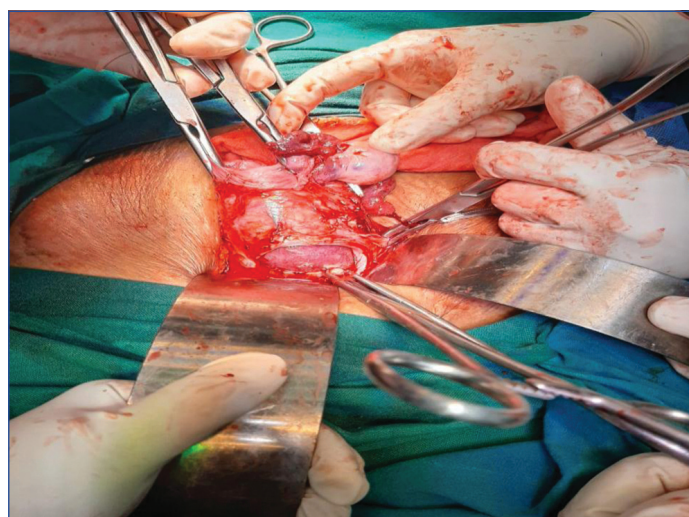
A 38-year-old parity one with single living child, tubectomised woman presented to the Outpatient Department of Gynaecology with a history of continuous bleeding per vaginum for one month. She also complained of frequent heavy menstrual flow every 15 days for the previous two cycles, difficulty in micturition, and constipation from one month. She used to feel mass occasionally into the vaginal canal which never came out of the introitus, for this complaint she went to some private clinic where she advised for ultrasonography which was suggestive of a bulky uterus of size 14.2×7×6.5 cm, a 6.8×4.8 cm mixed echogenic shadow at the centre and a fibroid of size 5.7×4.6 cm into the posterior uterine wall. She also had a history of three-unit blood transfusion in some private hospital because of severe anaemia two months back.

General examination and systemic examination was normal except severe pallor present. On per abdominal examination, abdomen was soft, non tender, no organomegaly was noted. Per speculum examination, showed a necrotic fowl smelling fibroid polyp of size approximately 6×5 cm into the vagina, active bleeding was present. On bimanual examination, approximately 6×5 cm firm globular mass was felt within the vaginal canal, cervical os appreciated separately around mass and its pedicle was not reachable. The uterus could not be palpated. On investigation, her haemoglobin was 6.6 gm%, platelet and coagulation profile were normal. Her intravenous pyelogram was normal. Contrast-Enhanced Computed Tomograph (CECT) abdomen and pelvis were planned. Continue per vaginal bleeding caused anaemia to patient. She was transfused three units packed red blood cells and planned for total abdominal hysterectomy with a diagnosis of cervical fibroid. With all aseptic precautions, the abdomen was opened in layers, Securing full homeostasis. Uterus was six weeks size, a cup-like depression was noted in the fundus of the uterus [Table/Fig-1].

Bilateral round ligaments, bilateral tubes, and ovaries were invaginated into the cup-like depression. Bilateral tubes and ovaries were normal. Attempt to reduce the uterine inversion was not successful. A transverse incision was given at the level of internal os anteriorly [Table/Fig-2]. An index finger was placed on the depression present on the fundus and another index finger introduced into the endometrial cavity. Inversion of uterus confirmed which was up to

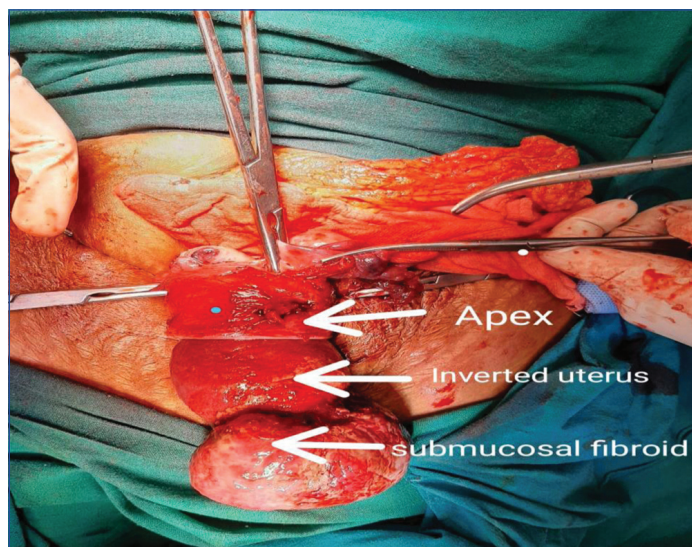


[Table/Fig-1]: Intraoperative findings of uterine inversion.



[Table/Fig-2]: Transverse incision in the lower segment of the anterior wall of the uterus at the level of the internal os.

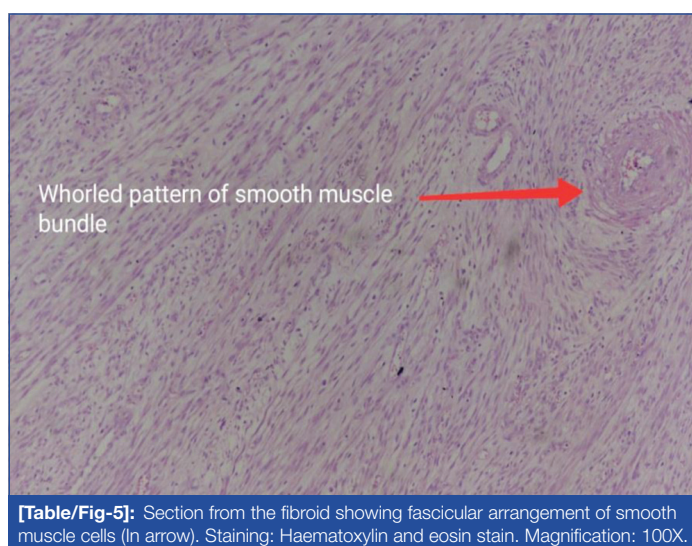
internal os with a submucosal sessile fibroid approximately 6x5 cm attached to the fundus of the endometrial cavity [Table/Fig-3]. Total abdominal hysterectomy, right salpingectomy with left salpingo-oophorectomy was performed [Table/Fig-4]. Abdomen was closed in layers securing full haemostasis. The postoperative period was uneventful. The patient was discharged under satisfactory condition on postoperative day six. After two weeks she came for follow-up and histopathology report shows features of leiomyoma with areas of haemorrhage [Table/Fig-5]. She was doing well after six months of follow-up.



[Table/Fig-3]: Submucosal fundal fibroid with an inverted uterus.



[Table/Fig-4]: Excised prolapsed fundal fibroid with an inverted uterus.



[Table/Fig-5]: Section from the fibroid showing fascicular arrangement of smooth muscle cells (In arrow). Staining: Haematoxylin and eosin stain. Magnification: 100X.

DISCUSSION

Uterine inversion occurs when the uterine fundus caving into the endometrial cavity. It is categorised as puerperal uterine inversion

when it occurs in the postpartum period and NPUI when it occurs secondary to benign or malignant uterine masses in non pregnant women [1]. There have been 170 case reports in the literature from 1940 till 2018. The most common cause was a fibroid (57.2%) followed by sarcoma (13.5%) [2]. The symptoms commonly associated with uterine inversion are abnormal uterine bleeding, abnormal discharge, and lower abdominal pain, and urinary retention is very rare [3].

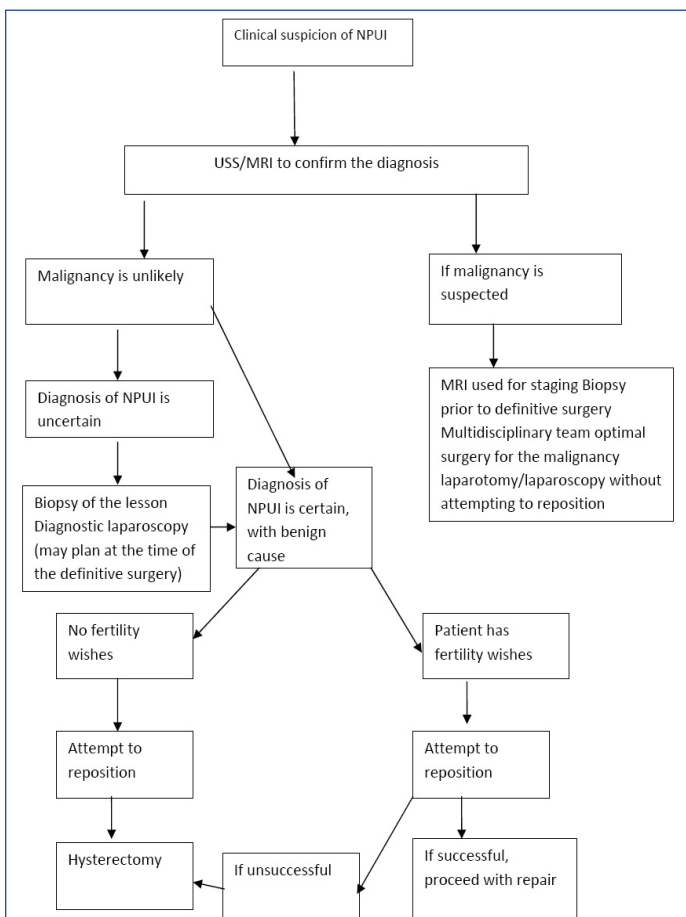
Degrees of uterine inversion [4]

- Incomplete: The uterine fundus inverts however does not herniate through the level of the internal os.
- Complete: Internal lining of the fundus crosses through the cervical os without palpable fundus in per abdominal examination.
- Prolapsed: Entire uterus prolapsing through the cervix and the fundus coming out of introitus.

Classification [4]: Acute: 24 hours or less after delivery, Subacute: more than 24 hours postpartum, Chronic: more than 1 month postpartum.

Its usually related to the presence of a polypoid uterine growth. Mwinyoglee J et al., mentioned that about 97.4% of uterine inversions were found to be associated with tumours and out of which 20% were malignant in nature [5], while Takano K et al., reported that 71.6% of cases of uterine inversion were associated with leiomyoma [3]. Three major contributing factors for uterine inversion are: (a) Thinning of the walls of uterus as a result of intrauterine tumour; (b) rapid emptying of uterus, which was earlier distended by the tumour; and (c) dilatation of the cervix [6,7]. Acute forms are mostly symptomatic while chronic forms can be asymptomatic or associated with pelvic pain with a sensation of heaviness or per vaginal bleeding. On physical examination, a vaginal mass can be detected, but the uterus is not palpable by bimanual examination [8]. Our patient presented with heavy menstrual bleeding over a one-month period, which led to a significant drops in haemoglobin requiring multiple blood transfusions before presentation to our hospital, with a vaginal mass that gives the appearance of fibroid polyp.

In numerous cases, the diagnosis of NPUI was not made until the inverted body was excised and during the laparotomy attempt to remove what was presumed to be a submucous fibroid [9]. Magnetic Resonance Imaging (MRI) and Computed tomography (CT) scan are the recent diagnostic tools, characteristics features of uterine inversion on T2-weighted MRI scans shows a U-shaped uterine cavity, thickened and inverted uterine fundus on a sagittal image, and a 'bulls-eye' configuration on an axial image [10]. Herath RP et al., propose the guide given in the algorithm in [Table/Fig-6] to investigate and plan treatment of Non puerperal uterine inversion [11]. In present case, ultrasound images were inconclusive; the prolapsed fundal submucous fibroid expands the cervix, which gives the appearance of a cervical fibroid. Surgery is usually challenging; different surgical interventions have been reported in the various literature. It may be practicable to safely conduct abdominal hysterectomy for uterine inversion without making an effort to reposition the uterus [1]. Omololu OM et al., has reported an unusual case of NPUI, which was clinically diagnosed and later on established at surgery where a vaginal hysterectomy was performed [12]. In index case because of heavy vaginal bleeding, recurrent blood transfusion emergency laparotomy was performed. Intraoperatively diagnosis of uterine inversion was made. Considering the age and no fertility desire total abdominal hysterectomy, right salpingectomy with left salpingo-oophorectomy was performed.



[Table/Fig-6]: Treatment algorithm of Non Puerperal Uterine Inversion (NPUI) [11].

CONCLUSION(S)

The NPUI secondary to uterine submucosal fibroid is a very uncommon condition. It remains a diagnostic challenge in gynaecology. NPUI secondary to submucous fibroid sometimes mimic as a cervical fibroid and diagnosed only during surgery. Surgery is the best method for the management of uterine inversion. Associated uterine pathology may alter the type of surgery.

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