

## A CASE REPORT OF UTERINE MYOMA CAUSING NON-PURPURAL UTERINE INVERSION

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**ABSTRACT:** Uterine inversion is a condition where the uterus is inverted downward with prolapse of the fundus in to the endometrial cavity and to the cervix. It is broadly classified as puerperal and non- puerperal based on cause of the uterine inversion with puerperal uterine inversion being the more common type of inversion. Here is a rare form of non-puerperal uterine inversion with fundal submucous myoma.

**KEY WORDS:** Haultain's method, Myoma, Uterine inversion.

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## INTRODUCTION

Uterine inversion is a condition where the uterus is inverted downward with prolapse of the fundus into the endometrial cavity and to the cervix. It is broadly classified as puerperal and non- puerperal based on the cause for the inversion<sup>1</sup>. Non-purpeural uterine inversion occurs mainly when the uterus acts to expel a tumor located at the fundus. The inversion is due to the thinning and weakening of the uterine wall at the seat of the tumor implantation due to pressure atrophy, which will be more marked when the tumor is larger and when the uterine contraction is stronger<sup>2</sup>.

Here we report a case of non-purpural uterine inversion caused by a submucous fundal myoma.

## CASE REPORT

A 40 years old para one mother came to our tertiary hospital referred after she presented with protrusion of mass per vagina of 5 days duration. She had history of heavy menstrual bleeding for the past two years and for two weeks prior she started to have difficulty of defecation and difficulty and discomfort during sexual intercourse with progressive vaginal fullness worsened during coughing and straining. For the previous 5 days, she started to have protrusion of mass per vagina which was not reducible and associated with dull aching pain. She had a home delivery 10 years back where the baby died after 4 hours of stay and since then she had difficulty conceiving but never sought medical care. She went to a nearby hospital and was transfused with 4 units of blood and with a diagnosis of chronic uterine inversion with fundal uterine myoma, she was referred to our tertiary hospital.

Upon evaluation, she was comfortable with intermittent dull aching pain. There was no palpable uterus on abdominal examination. There was a 10 X 10 cm firm mass protruding per-vagina which was difficult to replace. The vaginal walls were palpable along the protruding mass and the cervical ring felt at the level of the ischial spines. It

was difficult to pass a finger between the cervical ring and the mass; the fornices were normal. On rectal examination, the mass was felt in the vagina but uterus was not felt in the pelvic cavity (Fig 1).

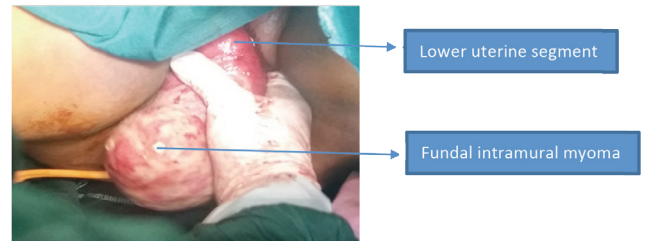


Fig 1: Preoperative vaginal finding of the chronic uterine inversion

After the diagnosis of chronic uterine inversion with fundal myoma was made, pre-operative evaluation and preparation was done and the patient was taken to the operative theater after informed written consent was taken.

Abdominal cavity entered via midline infra-umbilical incision and there was a cup shaped depression at the level of the cervical ring with bilateral tubes and ovaries being pulled through the cup shape depression, giving a flower pot and “kissing ovaries” appearance (Fig 2).

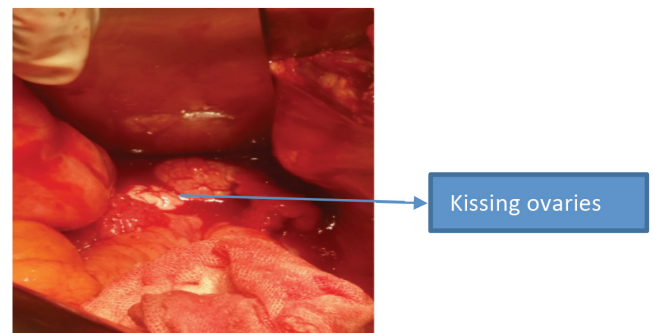


Fig 2: The intraoperative pelvic finding of the chronic uterine inversion

Vaginal myomectomy was done for the 6 x 8cm protruded submucosal myoma vaginally and then Haultain’s method, transabdominal incision was made, then vertical incision was done over the posterior cervical ring, used to replace the prolapsed

uterus into the pelvic cavity by pulling the uterus upward and with assistance pushing the fundus of the uterus up through the vagina. The incision was repaired with vicryl no. 1 continuously and the abdominal cavity was closed layer by layer (Fig 3).



case, which is pathology proven submucos myoma. The major factor that contributes to the occurrence of non-puerperal uterine inversion are the site of attachment of the tumor to the uterus, the thickness of the attachment, the size of the tumor, the thickness of the uterine wall, and the dilatation of the cervix<sup>5-10</sup>.

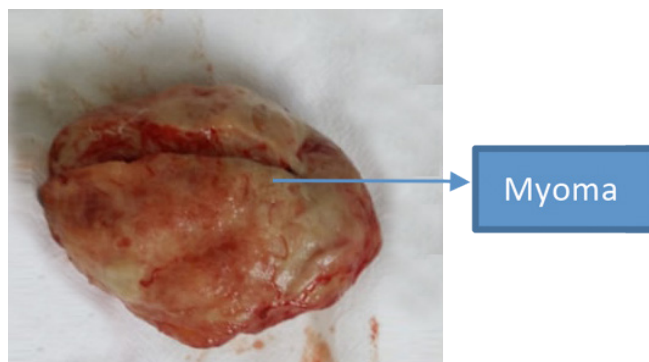


Fig 3: Intraoperative finding after vaginal myomectomy and uterine replacement

## DISCUSSION

Uterine inversion is a rare clinical finding with diagnostic and management challenges and it is usually classified as puerperal and non-puerperal uterine inversion. Uterine inversion is also classified according to the severity of the inversion as: first degree: where the fundus is inverted but limited to intrauterine cavity; second degree: complete inversion of the uterine fundus through the cervix; third degree: the fundus is protruding through the vulva; and fourth degree: when the vagina is involved with complete inversion through the vulva. It is also classified as acute, when inversion occurs in the first 24 hours of delivery; sub-acute and chronic inversion when the inversion occurs between 24 hours and 4 weeks and after 4 weeks respectively<sup>3,4</sup>.

The cause of non-puerperal uterine inversion ranges from non malignant causes like intramural or submucos myoma and endometrial polyp, to malignant causes like leiomyosarcoma and immature teratoma. Studies showed that around 80% of the causes for non;puerperal inversion were benign and 20% were malignant. Most of the reported cases of non-puerperal uterine inversion are caused by submucous myoma, such as in this

Presentation of women with non-puerperal uterine inversion depends on the degree of inversion, the underlying cause of inversion, and the onset of inversion. Most women present with insidious onset, whereas very few patients present with a sudden onset of inversion. Most women with submucous myoma causing inversion present with progressive protrusion of mass per vagina with dull aching pain and difficulty of sexual activities and defecation, whereas others present with a vaginal discharge, painless vaginal bleeding, and rarely with shock. Women with underlying malignant condition could present with sudden inversion with severe pain, vaginal swelling, and urinary and bowel difficulties<sup>6-10</sup>.

The uterus may appear as “target sign” with hyperechoic fundus on ultrasonography; ultrasound will also help to identify the underlying causes. MRI and CT have shown to be useful tools in inconclusive cases where MRI will demonstrate a U- shaped endometrial cavity and “bulls-eye” configuration in sagittal and axial images respectively<sup>8-11</sup>.

Management of uterine inversion depends on the degree of inversion and the cause of the inversion. Many surgical techniques like Huntington and

Haultain's, which are done abdominally, and Kustner and Spenelli procedures, which are completed vaginally, have been described for replacing the uterus into the pelvic cavity (2-14). In this case, after we treated the cause of the inversion by vaginal myomectomy, we used Haultain's method and successfully replaced the uterus in to the pelvic cavity.

#### **CONCLUSION**

Non-purpural uterine inversion is a rare clinical condition which presents with different degree of severity and having different causes. Successful management of a case depends on high index of suspicion, proper physical examination, identifying the cause of the inversion, and treatment of the underlying cause.

#### **ETHICAL APPROVAL AND CONSENT TO PARTICIPATE:**

Informed written consent was obtained from the patient for treatment.

#### **CONSENT TO PUBLISH:**

Consent was taken for publication of the case and the accompanying images.

#### **COMPETING INTEREST:**

The authors declare that there is no conflict of interest regarding the publication of this paper.

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#### **AUTHOR'S CONTRIBUTIONS:**

YF and SH identified, evaluated and diagnosed the case, reviewed literatures and wrote the case report while, EK and ST operated the patient. All authors have read and approved the manuscript.

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