International Journal of Science and Healthcare Research
Vol. 9; Issue: 2; April-June 2024
Website: ijshr.com
Case Report *ISSN: 2455-7587*

Chronic Uterine Inversion in a Young Adult: Case Report

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DOI: https://doi.org/10.52403/ijshr.20240243

ABSTRACT

Background: Uterine inversion is a rare but serious complication wherein the uterus is partially or completely turned inside out. It can either be acute or chronic. Unlike acute uterine inversion which occurs as a complication during parturition, which can be promptly managed, chronic uterine inversion poses a diagnostic difficulty even for an experienced gynecologist. We, herein, report a patient who was managed and followed up at our institution for chronic uterine inversion.

Case presentation: A 30-year-old female, P4L4 previous all vaginally delivered, presented with complaints of something coming out of her vagina, per vaginal bleeding and foul-smelling discharge. On Physical examination, the patient was severely anaemic and revealed a bleeding, necrotic mass on inspection and the entrance of the cervix felt high up on per speculum and per vaginal examination. The patient was diagnosed as having chronic uterine inversion. The patient was admitted and was made hemodynamically stable with intravenous fluids and three units of blood. Manual reduction using vaginal procedure to reposition the uterus wasn't successful, hence she was taken up for surgery. Fibroid was resected vaginally. Then Haultain rectification procedure was performed and then the definitive procedure of hysterectomy was done. Postoperatively, the patient was kept under observation and was vitally stable. Histopathology reported leiomyoma.

Conclusion: Though non-puerperal uterine inversion is rare, a few cases will still have to be managed without any previous experience. This differential has to be considered as a possibility in a non-pregnant woman presenting with bleeding or mass per vagina with or without hypotension and can very rarely present as postmenopausal bleeding. Irrespective of age or parity, pre-operatively or intra-operatively, associated malignancy is to be ruled out in every case of uterine inversion. The prognosis depends on prompt diagnosis and timely intervention.

Keywords: Fibroid, chronic, non-puerperal, uterus, inversion.

INTRODUCTION

Uterine inversion is a condition where the uterus is turned inside out, it can be of two types, partial or incomplete wherein the fundus of the uterus is turned inside out but the inverted fundus has not descended through the cervix, or complete inversion wherein the fundus of the uterus has passed completely through the cervix to lie within the vagina or often outside the

vaginal wall. It can be further classified into four degrees, first, the uterus is partially turned inside out; second, the fundus has passed through the cervix but not outside the vagina; third, the fundus is prolapsed outside the vagina; fourth, the uterus, cervix, and vagina is completely turned inside out and are visible outside.

Uterine inversion can be caused due to various reasons. Acute inversion is a rare unpredictable obstetric complication occurring within 24 hours of delivery due to adherent placenta, uterine atony, prolonged labor, the mismanaged third stage of labor, and congenital weakening of the uterus, wherein a patient can land up in shock either neurogenic or hemorrhagic which has to be managed in the quickest way possible requiring teamwork for resuscitation and uterine reposition simultaneously. Chronic uterine inversion is a complication that occurs either beyond 4 weeks of delivery or in a non-pregnant woman which can be due to causes such as submucosal myomatous polyp in the fundal region causing traction effects, sarcomatous changes in fundal fibroma infiltrating myometrium, weakening of uterine walls and causing inversion it can also occur following cervical amputation possibly due to cervical atony or incompetency

Common clinical features of non-puerperal inversion are chronic vaginal discharge, and heavy menstrual bleeding causing anemia, some cases may present with difficulty in voiding and lower abdominal heaviness. It might present acutely with hemorrhagic shock or excruciating pain. Treatment is based on preoperative diagnosis, principle of management is to reposition the uterus to its normal position by abdominal or vaginal method, hysterectomy either abdominal or vaginal is recommended for benign cases in patients with a completed family. In cases of malignancy, radical management must be done.

CASE REPORT

A 30-year-old, multiparous woman with previous all vaginal delivery, non-tubectomised, widowed female, with her last childbirth one year ago presented with complaints of something coming out of her vagina which was insidious in onset and progressive in nature associated with per vaginal bleeding and foul-smelling discharge, the protrusion became more prompt with micturition and defecation. Her menstrual cycles previously were regular with 5-6 days of bleeding. But in the past 4 to 6 months, she had been experiencing heavy menstrual bleeding that exceeded 10 to 15 days and also experienced brownish foul-smelling discharge for which she did not report to the hospital. In the last 15 days, her condition worsened with heavy fresh bleeding with the passage of clots accompanied by dizziness, generalized weakness, and abdominal pain. There was no relevant past or family history.

On physical examination, the patient's general condition was poor, she was severely anaemic with a pulse rate of 110/min and was normotensive. On abdominal examination, her abdomen was soft with no tenderness and no palpable organs or ascites. On bimanual pelvic examination a large bleeding, necrotic, globular mass of size about 15* 10 cm protruding outside the vulva with the broad end pointing downwards and looking reddish purple was noted on inspection and the entrance of the cervix felt high up on per speculum and per vaginal examination and uterus could not be palpated. The patient was diagnosed as having chronic uterine inversion. A thorough physical examination helped us make a provisional diagnosis of second-degree uterine inversion i.e. complete inversion of uterine fundus through the fibromuscular cervix.

On the Ultrasonography it was reported to be a large pedunculated mass with necrosis of size 9*7cm arising from the fundus of the

uterus hanging out of the vagina causing uterine inversion.

This helped further confirmation of our diagnosis. The patient was counselled, admitted, and managed conservatively to prevent infections and was treated for anaemia. She was given three units of blood and was hemodynamically stabilized. After which she was taken up for evaluation under anaesthesia, she was examined and was found to have uterine inversion with a fundal fibroid of 10*10 cm. Her external meatus looked grossly normal, foley's catheterization was done and the cervix was felt high up.

Surgery was planned which was done under spinal anesthesia. Under anesthesia, the patient was given a lithotomy position, with evidence of fundal fibroid of size 10*10cm with complete inversion of the uterus. Supraumbilical trocar and cannula were inserted, and complete inversion of the uterus was confirmed. Manual reduction was tried using vaginal procedure to reposition the uterus which wasn't successful, hence she was taken up for surgery. Fibroid was resected vaginally. Then the abdomen was opened using a Pfannenstiel incision, intraoperatively there was evidence of complete inversion and ovaries protruding out of the cervical ring. Haultain rectification procedure was performed by dissecting the cervical ring at 6 o'clock position, incision was extended towards the fundus, and reversion of the uterus was performed. Then the definitive procedure of hysterectomy was performed as the uterus was not salvageable. On gross examination of the tissue resected from uterine fundus appeared to be a fibroid which was later confirmed by histopathological examination of the specimen.

Postoperatively patient was kept under observation and was vitally stable. She was given prophylactic antibiotic therapy for 5 days and was discharged later.

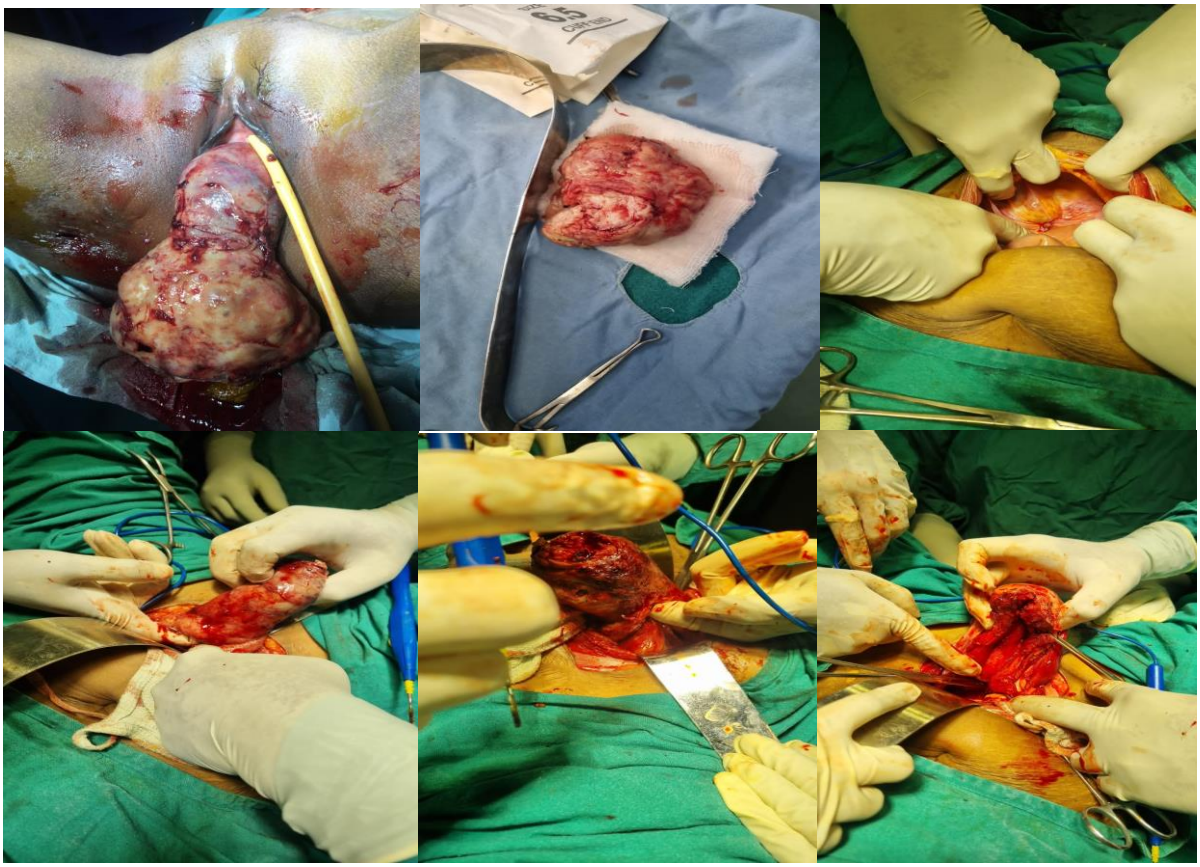

Figure 1: (from left to right: fundal fibroid with complete uterine inversion, fibroid of size 10*10cm resected vaginally, intraoperative view of uterine inversion through abdominal incision, Haultain rectification procedure done, reversion of uterus to the normal anatomy).

DISCUSSION

Chronic uterine inversion refers to the descent of the uterine fundus to or through the cervix, so that the uterus is turned inside out. Chronic uterine inversion is a very rare condition posing diagnostic and treatment difficulties. There can be various preceding factors such as uterine leiomyoma, endometrial polyps, neoplasms like leiomyosarcoma, rhabdomyosarcoma, endometrial carcinoma, cervical carcinoma, and total uterovaginal prolapse have been described as possible preceding factors. In the early postpartum period, placental and endometrial fibroids can also cause uterine inversion.

All cases of nonpuerperal inversions are usually chronic but may present acutely. Symptoms that may be associated with non-puerperal uterine inversion are usually vaginal bleeding, vaginal tumor, lower abdominal pain, foul-smelling vaginal discharge, and urinary disturbance. In acute uterine inversion, massive hemorrhagic loss could be seen and hypovolemia should be vigorously treated with fluid and blood replacement. Early diagnosis and treatment of uterine inversion are very important. Non-puerperal uterine inversion is a very unusual condition that most gynecologists will never encounter and thus has to be managed based on little or no previous experience.

Our patient had been experiencing discomfort for 4 months or more which was neglected by her, due to which the incomplete inversion caused by the fundal fibroid was left untreated and presented as chronic uterine inversion with vaginal bleeding causing severe anemia. The clinical diagnosis of chronic inversion mostly depends on a thorough physical examination showing a mass coming through the cervix, accompanied by the absence of the uterine body during bimanual or rectal examinations. Ultrasonographic evaluation has a major role in the initial investigation. The mass in the vagina first seemed like fungating cervical malignancy with procidentia in our case. However further physical evaluation, ultrasono-graphy, and a detailed history revealed the uterine inversion diagnosis. A high index of suspicion, thorough physical examination and imaging is required to make a prompt diagnosis.

Chronic uterine inversion usually results in the formation of a dense constriction ring, progressive edema, and tissue necrosis, the uterus can't be reverted to normal anatomy by manipulation. Hence, surgery is usually required. If managed in a timely correct manner, uterine inversion has a good prognosis. Surgical management depends on various factors like preoperative diagnosis, stage of inversion, the extent of necrosis, age of the patient, the reproductive desire for parturition, and the skill of the attendant. In benign cases with a completed family, abdominal or vaginal hysterectomy is recommended and in cases associated with malignancy, radical treatment is necessary.

Some surgical methods are available to treat chronic non-puerperal uterine inversion. The efficacy of non-surgical methods is not clear. Huntington and Haultain's techniques are commonly used in abdominal operation procedures. The Kustner and Spinelli are the vaginal approach procedures which can be used. Robotic and laparoscopic surgeries are upcoming advances for treating chronic uterine inversion. Abdominal cerclage operations for prevention of uterine inversion can be performed. The degree of hemorrhage, the rapidity of diagnosis, and the effectiveness of the treatment decides the morbidity and mortality associated with uterine inversion.

In our case, the patient was made hemodynamically stable, and prophylactic broad-spectrum antibiotics were given to prevent sepsis, we corrected the uterine anatomy by using the Haultain rectification technique after having resected the fundal fibroid vaginally then performed definitive treatment of hysterectomy.

CONCLUSION

Chronic uterine inversion caused by a uterine pathology is a very rare condition

that is difficult to diagnose even for experienced gynecologists. Uterine inversion has an excellent prognosis when managed in a timely correct manner. Nonsurgical methods can be considered but ultimately surgical methods are a definitive solution. Surgical rectification of the uterine anatomy either by abdominal or vaginal route can be performed with or without preserving the uterus which is done after considering various factors like preoperative diagnosis, stage of inversion, the extent of necrosis, age of the patient, the reproductive desire for parturition, and the skill of the attendant.

Declaration by Authors

Acknowledgement: None
Source of Funding: None
Conflict of Interest: The authors declare no conflict of interest.

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How to cite this article: Anusha Suresh Shetty, Kiran Shinde, Santosh Shahane. Chronic uterine inversion in a young adult: Case Report. *International Journal of Science & Healthcare Research.* 2024; 9(2): 334-338. DOI: *https://doi.org/10.52403/ijshr.20240243*

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