



Case Report

Inversion of uterus - vagaries of presentation

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Introduction

Inversion of uterus is a rare entity. It could have acute and chronic forms. Acute inversion generally occurs during or immediately after childbirth causing shock. Sometimes it is incomplete at the time of delivery, without producing many symptoms at that stage or it could also occur gradually during the puerperium with prolonged postpartum bleeding. The reported incidence of puerperal uterine inversion is 1 in 1860 with cesarean section (CS) and 1 in 3737 with vaginal deliveries¹. Nonpuerperal inversion is rare, with no published figures available regarding its incidence. It is usually associated with an underlying benign or malignant uterine mass. A pedunculated tumor of the fundus of the uterus may also be responsible. Rarely spontaneous inversion may occur in old age without any neoplasm, probably due to overall atony.

We present four cases seen within a short span of weeks, all with different modes of presentation.

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Case reports

Case 1

A 24 year old woman was referred from a peripheral health center with the diagnosis of postpartum hemorrhage (PPH) on 31st May, 2004. She had normal delivery two hours prior to admission followed by heavy vaginal bleeding which continued till admission. She had tachycardia and hypotension. Abdominally uterine fundus could not be palpated but cupping could be appreciated. Speculum examination revealed fresh bleeding and a mass of 8x10 cm in size inside the introitus. Bimanual examination revealed a firm mass in the vagina but fundus of the uterus was not felt. A clinical diagnosis of acute inversion of uterus was made. To know the possibility of vaginal manual reposition, a gentle examination was done under anesthesia which revealed a tight cervical ring quite high up. In view of the findings and the poor general condition due to heavy bleeding, abdominal reposition was planned. On opening the abdomen only cupping was visible. However uterine reposition was successfully achieved by the combined abdominovaginal approach by first pulling up with little assistance from vagina the part which got inverted last (modification of Huntington's procedure). She tolerated the surgery well.

Case 2

A 26 years primigravida had delivered a term baby

vaginally uneventfully on 1st June, 2004. However after the expulsion of the placenta she had more than average bleeding. On speculum examination she was found to be having third degree inversion of uterus. She was taken to the operation theatre immediately and manual reposition was done with difficulty under general anesthesia. Postoperatively she was hemodynamically stable. However 3 hours later she again had heavy bout of vaginal bleeding. Abdominally fundal dimpling was noted. On bimanual examination cervical rim was edematous and the fundus seemed to have reinverted but was above the internal os. With the diagnosis of incomplete reinversion of uterus intrauterine packing was done to further prevent the progress of inversion. The pack was removed 12 hours later. She remained stable with minimal vaginal bleeding thereafter.

Case 3

A 20 year old parous woman presented on 7th September 2004 with continuous vaginal bleeding since delivery conducted by an untrained birth attendant 5 months back. Her vitals were stable except severe pallor and systemic examination revealed no abnormality. Local and speculum examination revealed a 5 x 5 cm mass at the introitus, with cervical ring visualized high up. A vaginal examination revealed no space between the ring and the base of the mass. After proper work up and two units of blood transfusion, she was operated upon. Under anesthesia the uterus was repositioned vaginally by holding the cervical rim with multiple Babcock forceps and applying continuous digital pressure over the inverted uterus in such a way that the part of the uterus that was inverted last was reposed first. Incidentally we prefer Babcock forceps for cervical traction over any other instrument.

Case 4

A 60 year old women, 10 years postmenopausal had presented to the gynecology outpatient on 8th March, 2005 with complaints of vaginal blood stained, foul smelling discharge associated with backache and myalgia since 3 years. She had her menopause 10 years back. Her general and systemic examinations did not reveal any abnormality. On speculum examination cervix seemed to have been replaced by a growth around 6x6 cm in size which bled on touch. Gentle bimanual examination revealed the same. Because of the danger of heavy bleeding no attempt was made to feel the uterus. Rectal examination revealed induration on both sides of the pelvic wall with tenderness. Size of the

uterus also could not be made out but the rectal mucosa was free. With the possible diagnosis of carcinoma cervix stage III B, it was planned to review staging by examination under anesthesia after antibiotic therapy. The biopsy from the growth confirmed it to be poorly differentiated squamous cell carcinoma. While awaiting proper staging and further plans about therapy the patient received one dose of Cisplatin. During this period one morning she complained of a mass coming out of the vagina. The growth which was thought to be replacing the cervix was lying outside the introitus. It was necrotic with slough but the uninvolved part above the growth which was thought to be a part of the cervix looked unusually bluish. Size of the growth had reduced, and it could be pushed inside the vagina and it was freely mobile. At this stage the clinical staging of the cervical cancer was II A and hence a Werthiem's hysterectomy was planned and she was prepared accordingly. When the abdomen was opened for radical hysterectomy a classic flowerpot appearance was visible with cupping of the uterus with the tubes and ovaries completely inside the cupped uterus. The case appeared operable. The posterior ring of the inversion was cut and the uterus was pulled up. Werthiem's hysterectomy was performed. Removed uterus showed a necrotic growth of about 5x4 cm in size on the right side of the posterior wall. The growth that was thought to be arising from the cervix was actually a growth from the funds involving the right posterolateral wall going upto the isthmus of the uterus. Histopathology revealed that the tumor of the endometrium was spreading upto the isthmus infiltrating the superficial myometrium also. She was discharged in good condition and at 6 months follow up she was doing fine.

Discussion

Inversion of uterus may be classified into two groups: puerperal and nonpuerperal. Puerperal uterine inversion is one of the most serious complications in obstetrics². A nonpuerperal uterine inversion is uncommon. Most cases of nonpuerperal uterine inversion are chronic and diagnosis is often difficult on physical examination. The degree of uterine inversion may be incomplete, complete or total. Clinical diagnosis of uterine inversion is difficult unless the fundal depression can be palpated on rectal examination. Idiopathic inversion is very rare. In the present series there are two cases of acute puerperal inversion which form the commonest cause of inversion. The 3rd case is of chronic puerperal inversion and the last one of acute chronic inversion.

Nonpuerperal uterine inversion occurs due to a tumor or an idiopathic event. It is usually associated with uterine fibroid but rarely with uterine sarcoma. Clinical features of chronic inversion include chronic vaginal discharge, irregular vaginal bleeding, anemia and pelvic discomfort³. Sometimes its presence may not be appreciated until the time of surgery⁴ as happened in our present case. Rarer causes include uterine tumors such as sarcoma^{4,5} and less commonly carcinoma as in our nonpuerperal case^{4,5}. Our fourth case presented with blood stained vaginal discharge. A rare case of chronic nonpuerperal uterine inversion due to malignant mixed mullerian tumor has been reported⁶. Imaging procedures such as ultrasound and magnetic resonance imaging (MRI) facilitated diagnosis of uterine inversion⁵. Takano et al⁵ have reported two cases of uterine inversion in which MRI showed U-shaped uterine cavity with the pedicles of these tumors attached to the uterine fundi. MRI is too expensive and not available to most patients in resource poor countries.

Treatment of uterine inversion depends on the preoperative diagnosis. There may be massive pulmonary embolization after attempted repositioning of an idiopathic nonpuerperal inversion followed by hysterectomy. Kopal et al⁷ suggest clamping and cutting the infundibulopelvic ligaments as the first step in order to prevent an embolus due to pelvic congestion⁷.

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