Inversion of uterus due to prolapsed submucous fundal fibroid

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Received: 14 Feb 2022
Accepted: 1 Dec 2022

Citation: Pandey M, Shrestha B, Acharya BC, Subedi H, Gurung RR, Baniya S. Inversion of uterus due to prolapsed submucous fundal fibroid. Nep J Obstet Gynecol. 2022;17(35):78-82. DOI: https://doi.org/10.3126/njog.v17i2.52382

ABSTRACT

Inversion of uterus is rarely encountered by gynecologist during practice; inversion in a non-pregnant uterus is further rarer; only case reports are published in literature on non-puerperal uterine inversion. We present a case of a 40-years multipara who had a history of irregular and excessive vaginal bleeding associated with severe lower abdominal pain during vaginal bleeding for two years. She was referred from general hospital with suspicion of cervical cancer. Being a rare clinical condition diagnosis and management of uterine inversion is challenging. High index of clinical suspicion is necessary which can be aided by radiographic imaging. Our case was diagnosed as a case of complete uterine inversion secondary to fundal fibroid clinically. She underwent abdominal hysterectomy with bilateral salpingectomy with bilateral sacrospinous vault suspension after resuscitation with fluids, blood transfusion and broad-spectrum antibiotics.

Keywords: hysterectomy, submucous fibroid, uterine inversion

INTRODUCTION

Inversion of uterus is a rare clinical condition where the fundus of the uterus turns inside out into uterine cavity and depending on the degree of inversion later protrudes through the cervix into vaginal canal or out through the vulva. In 1951, Jones classified inversion of uterus into two types: puerperal or obstetric and non-puerperal or gynecological.[1] Puerperal inversion are usually seen following delivery of the fetus and the commonest cause being mismanagement of third stage of labor. Few cases of puerperal uterine inversions are seen following abortion.[2,3] Non puerperal uterine inversion is commonly due to submucousal leiomyoma, other rare causes are fibrosarcoma, endometrial sarcoma, carcinosarcoma, rhabdomyosarcoma, endometrial polyp, pelvic organ prolapsed etc.[1] Non puerperal inversion of uterus is a rare clinical condition with total 303 cases reported from 1911 till September 2018.[1] Being a rare clinical entity, rarely encountered during practice; diagnosis and management of non puerperal uterine

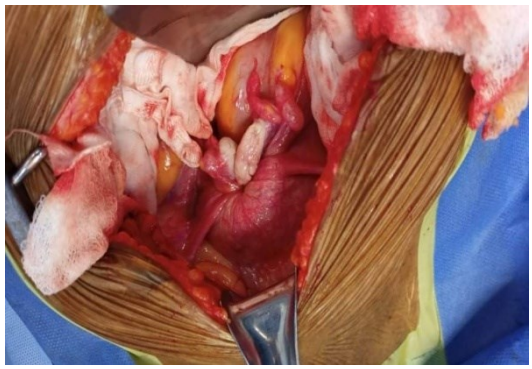
inversion is challenging. So here we report a case of inversion of uterus presenting with severe lower abdominal pain, per vaginal bleeding being referred from general hospital with suspicion of cervical malignancy.

CASE

Fourty - years multiparous lady presented in the emergency department of B.P. Koirala Cancer Hospital, Bharatpur, Chitwan , with complaints of severe lower abdominal pain and per vaginal bleeding. She had a history of irregular vaginal bleeding occurring twice or thrice in a month for two years. Her vaginal bleeding used to be excessive with passage of clots and lasts for three to five days. She used to have severe lower abdominal pain during vaginal bleeding since two years. She had not consulted to a doctor previously. The symptoms of lower abdominal pain and vaginal bleeding was severe than it used to be before so she went to nearby general hospital. She was referred to our hospital with suspicion of cervical cancer. There was no history of bleeding from other sites of body, rashes, loss of weight, loss of appetite, any urinary problems. There was no history of any mass per vagina and postcoital bleeding. There was no history of cough or other strenuous activities prior to presentation to our hospital. She had history of generalized weakness for three months. She had delivered three children vaginally, all of them at home and uneventful. Her last childbirth was eighteen years back. She has history of minilaparotomy for permanent sterilization ten years back. She had no known medical illness, no family history of cancer. On physical examination she was severely pale with tachycardia (110/minute), blood pressure - 100/50 mm of Hg. On per abdominal examination minilaparotomy scar was seen, no mass palpable. On local examination of vulva – there was a sloughed mass of about 8 x 8 cm protruding through the vagina. On bimanual examination cervix was not felt, whole length of vagina was not felt, repositioning of the mass was done, bleeding was profuse so packing was done. Counseling of patient party was done, baseline investigations were sent which showed hemoglobin 5gm%, total WBC count of 15,700 with neutrophil 89%, rest of the investigations were within normal range. Injection tranexamic acid 500mg iv TDS, injection Ceftriaxone 1gm IV BD, inj Metronidazole 500mg IV TDS, inj Amikacin 500 mg IV BD along with intravenous analgesics were started. Advice was given to arrange four pint of blood for transfusion. But patient party could arrange only two pint of blood that day. As bleeding was continuous patient was shifted to operation theatre. Examination under intravenous anesthesia was done. Vulva and vaginal wall were normal. The mass which was protruding through vulva was avulsed, mass seems like fibroid on gross appearance arising from fundus of uterus. The fundus of uterus was completely inverted out with presence of profuse bleeding from amputed stump of sub mucous fundal fibroid. Haemostatic suture was applied. As arrangement of blood was not done and also bleeding was controlled so vaginal packing was done with adrenaline with plan to proceed with laparotomy after arrangement of blood. Diagnosis of complete uterine inversion secondary to prolapsed fundal fibroid with severe anemia was made. On the second day of admission, after arrangement of blood, laparotomy was done under general anesthesia. Findings noted were complete inversion of uterus with bilateral round ligaments, fallopian tubes and ovaries were withdrawn inside the cup of fundus with

typical flower vase \appearance of uterus. [Figure-1]

Figure-1: Intraoperative finding of classical



flower vase appearance of uterus

Attempt was made to reposition the uterus using Huntington's approach, but it was not successful. Haultain's operation was done with a total abdominal hysterectomy with bilateral salpingectomy. As we are not routinely familiar with this operation incision was extended to posterior vaginal wall also which was later repaired after hysterectomy. Bilateral sacrospinous suspension of vault was done. Total eight pint of blood transfusion was done. Postoperative period was uneventful except there was abdominal wound dehiscence. Re suturing was done on 17th postoperative day and patient was discharged after suture removal on 27th post operative day. Her final histopathology showed leiomyoma with secondary changes on avulsed polypoidal mass, chronic cervicitis , endometrium basalis and unremarkable bilateral fallopian tubes.

DISCUSSION

Non puerperal uterine inversion is a rare clinical condition and is usually caused by bigger sized tumors within the uterine cavity mostly arising from the fundus of uterus causing traction due to its weight.[4] Other possible explanation for the cause of uterine inversion are thinning of uterine wall either due to tumors or inflammation , dilatation of cervix due to distention of uterine cavity by big tumor.[5] Increased intra-abdominal pressure as occurs during coughing , sneezing, straining may precipitate uterine inversion if above mentioned etiological factors are already present.[1]

Chronic inversion of uterus usually presents with irregular vaginal bleeding resulting into anemia, vaginal discharge, discomfort in pelvis or pelvic pain, sensation of something in the vagina or in some cases retention of urine due to urethral obstruction.[6,7] Our case also had all above mentioned symptoms except vaginal discharge, sensation of something in the vagina and urethral obstruction. A case reported by Singh and Ghimire in 2020 had similar symptoms of irregular and excessive vaginal bleeding of 15 months duration like our case. However in our case there was no history of feeling of something inside vagina as it was present in their case.[3]

In 1968, Lascarides described three important clinical signs for diagnosing non puerperal uterine inversion: first, the cervical ring may not be recognizable in the proximal part of the mass; second, opening of cervix cannot be found or probe cannot be inserted into endometrial cavity; third, on rectal examination cupping of the fundus can sometimes be palpable but more commonly uterus is not in its normal position in pelvis.[1] In our case only first sign was elicited. So diagnosis was confirmed only after examination under anesthesia.

There are four stages of uterine inversion as described in literature: first, incomplete inversion where fundus of uterus is inside the uterine cavity; second, a complete inversion of the fundus of uterus through the cervix into the vagina; third, total inversion, where the fundus protrudes outside the vagina into the vulva and lastly the fourth stage where vagina is also involved with total inversion of uterus.[5]

Imaging in the form of ultrasonography, 3D power Doppler with ultrasonography, MRI pelvis, CT scan helps in diagnosis of uterine inversion and its etiology in addition to the clinical examination.[1,2]

Surgery is the treatment of choice for non puerperal inversion of uterus. Depending on the age of the patient, her desire for future fertility, cause of inversion, if malignancy then its stage, type of surgery varies. It can be done by abdominal or vaginal or by combined approach. Repositioning is must if preservation of uterus is needed. Even if hysterectomy is planned then it becomes easier after repositioning the uterus in its normal anatomical position. Huntington and Haultain procedures are commonly used abdominal approach. Kustner and spinelli procedures are the commonly used vaginal approach.[1, 8]

Our present case is of a non puerperal uterine inversion presenting with classic symptoms and the cause for it was a big fundal fibroid as confirmed by final histopathology. Clinical diagnosis was made. She was suspected as a case of cervical cancer and was referred to our hospital for further management. Diagnosis of uterine inversion being a rare condition is challenging and high index of suspicion is required. Timely management is essential to prevent complications like massive hemorrhage, shock, sepsis etc. As our case was 4o years with completed family so hysterectomy was done with preservation of bilateral ovaries. Though there has not been mentioned about role of vault suspention in case of uterine inversion, it was done in our case.

As patient had symptoms of abnormal uterine bleeding since two years, probably inversion could have been prevented if cause of abnormal uterine bleeding was diagnosed early with investigations and treated. As patient had undergone morbidity of multiple blood transfusions (eight pints), prolonged hospital stay (nearly one month), increased cost of treatment, even hysterectomy could have been prevented if cause of abnormal uterine bleeding could have been identified earlier.

CONCLUSIONS

Non puerperal inversion of uterus is a rare clinical condition with difficulty in diagnosis and management. High index of suspicion of uterine inversion is required in a case of huge, prolapsed fibroid.

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