

Chronic Postmenopausal Uterine Inversion: A Case Report

Dejene Asefa* and Nadia Yimar

Department of Obstetrics and Gynecology, Jimma University, Jimma, Ethiopia

*Corresponding author: Dejene Asefa, Jimma University, Ethiopia, Tel: +251911-879-183; E-mail: dokdeje@yahoo.com

Rec date: May 01, 2016; Acc date: June 02, 2016; Pub date: June 10, 2016

Copyright: © 2016 Asefa D, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

Introduction: Chronic non-puerperal uterine inversion is rare and emerges particularly in an over-aged group of women of reproductive age, usually associated with uterine pathology. Its diagnosis is based on high index of suspicion.

Case presentation: A 70-year-old para-2 Ethiopian woman came to our hospital with a complaint of mass protruding per vaginum of month duration for it become painful and irreducible over the last five days. Subsequently vaginal hysterectomy done via combined abdomino-vaginal approach. The certainty of diagnosis of inverted uterus reached intraoperative when a dimple with a diameter of 3 cm in the midpelvis containing bilateral round ligaments, infundibulopelvic ligaments and bladder were seen intraoperative after laparotomy. Gross examination of cut section of the removed uterus showed a fundally located fundal myoma which was confirmed on histopathologic examination which revealed degenerating uterine fibroid and a dense chronic inflammation with necrosis of the endometrium.

Conclusion: Non-puerperal chronic inversion of the uterus is rare and thus its diagnosis should be based on high index of suspicion. Though, mentioned in literatures of case reports to occur commonly in over-aged group of women of reproductive age, its diagnosis should be considered at any age in postmenopausal period. Super infection of the inverted part should be suspected and treated with appropriate broad spectrum antibiotics before the surgery. Usually it is a first encounter for a gynecologist and an attempt in restoration and abdominal hysterectomy may be difficult mandating vaginal approach.

Keywords: Leiomyoma; Non-puerperal uterine inversion; Vaginal hysterectomy

Introduction

Uterine inversion refers to descent of the uterine fundus to or through the cervix, so that the uterus is literally turned inside out. It is a rare condition and most uterine inversions are acute and puerperal (85.8%) [1-6]. Non-puerperal inversions are described in very few patients and are also said to be chronic or gynecological uterine inversion. They represent about one sixth of all inversion cases (16.35%) [4,7]. Non-puerperal inversions occurring acutely is rare and so far there was report in which 8.6% of the non-puerperal uterine inversion occurred suddenly [6]. Because of the rare occurrence of non-puerperal uterine inversion most gynecology specialist won't see one in their life time [1-4,8].

Gynecological uterine inversion occur usually associated with uterine pathology and it emerges particularly in an over-aged group of women of reproductive age [1-4]. Prolapse and extrusion of fibroids especially a sub mucous myoma of the fundus tends to be the most common factor inciting the inversion in 80%-85% of cases. Other less common causes are endometrial polyps and inversion associated with uterine neoplasm [1,4,8,9]. Also mentioned in literature are the use of hormone replacement and the presence of increased intra-abdominal pressure which are considered to promote the occurrence of uterine inversion [3].

The preoperative diagnosis of non-puerperal uterine inversion is often difficult and requires high index of suspicion [10]. It is a gynecologic problem which is treated exclusively by surgery and the type of surgery depends on the desire for future fertility by the patient, thus uterus sparing surgical treatment is the ideal in those who are in need. The route for operations can be either abdominal or vaginal or by combined abdomino-vaginal approach. Huntington and Haultain procedures are the commonly used abdominal approaches and Kustner and Spinelli procedures are the commonly used vaginal approaches [1,10-12].

Presentation of the Case

A 70-year-old Para-2 mother who was amenorrhoeic for over the last 25 years admitted to our hospital (Jimma University Teaching Hospital, Ethiopia) on the 15th of May 2015 being referred from one of the surrounding district hospital after she presented with a mass per vagina of a month duration for it become painful, irreducible and associated with lower abdominal pain, urinary complaint and a foul smelling vaginal discharge which sometimes gets tinged with blood over the last five days. Initially, prior to the last five days, the mass extrudes every two to three days while she is walking for a long distance and upon heavy exertion which gets reduced spontaneously when lying in bed. She claimed to have no fever, rigors or chilliness. Her pas obstetric history reveals that both of her deliveries were at home assisted by traditional birth attendants vaginally and the duration of her labour was less 12 hours at both times. She had no known past medical, surgical and gynecologic problem except for a

history of raised blood pressure diagnosed in the health center one year back but not on medication.

On presentation, her blood pressure (BP) was 140/90 mmHg; otherwise other vital signs were normal her weight was 56 Kg. On inspection of external genitalia; there was a large, fleshy ulcerated and infected mass protruding through introitus past the hymen with patches of purulent and foul smelling discharge on its surface. The leading edge of the mass was about 14 cm past the hymenal ring and it is globular shaped and about 7 × 6 cm in dimension attached to what appeared to be an inverted uterus. Upon palpation, the mass is tender and firm which bled on being touched and the cervix couldn't be seen or delineated on palpation. Also, the external urethral meatus and tubal ostia could not be seen and on rectal examination neither a uterus nor a pelvic mass felt.

The lab investigation result showed; normal renal function testes, urinalysis suggestive of urinary tract infection, complete blood count (CBC) showing mild drop in hemoglobin and hematocrit level, 10.7 and 32 respectively. Up on imaging, the chest X-ray is normal and on pelvic ultrasound performed per abdomen neither the uterus nor pelvic mass seen. On abdominal sonography, no abnormal findings reported and both kidneys were normal in echo-texture, size and no hydronephrosis.

Thus, based on the above clinical features, non-puerperal uterine inversion with super-infection was strongly suspected and to rule out endometrial cancer. Other differentials considered were; 3rd degree utero-vaginal prolapse, delivered leiomyosarcomas of the uterus, and endometrial polyp the patient was admitted to Gyn ward.

Then the patient was admitted and started on broad spectrum antibiotics and perineal and wound care. Upon follow up, there was no new development or problem and all of her vital signs including BP were normal during her stay in the ward. After three weeks of wound and perineal care; she claimed that the pain from the protruding mass and in the lower abdomen has decreased substantially and the foul-smelling discharge has disappeared. On re-examination, the protruding mass per vaginum looks fleshy and areas of ulcerations started to heal and the discharge on its surface has disappeared. Upon palpation, it doesn't bleed and the tenderness has disappeared with the cervix being palpated anteriorly about 2 cm below the hymenal margin (Figure 1).

We put the patient in supine semi-lithotomy position and laparotomy was performed with the goal of abdominal hysterectomy after restoring the inverted uterus to its normal anatomic state under general anesthesia. After inspection of intraabdominal structures we packed the bowel away and on visualization of the pelvis we couldn't find the uterus and instead we got a circular depression at the center of pelvis which was about 3 cm in diameter and bilateral round ligaments and utero-ovarian ligaments and bladder drawn into the dimple. Using procedure described by Huntington, the round ligaments were followed into the circle with gentle traction on it and assisted by a pressure exerted from the vagina by the assistant surgeon but we were not successful in replacing the uterus to its position. Then we decided and proceeded with vaginal hysterectomy with the 2nd assistant surgeon being visualizing the ureters abdominally and the procedure was successfully completed. The removed tissue was cut along its longitudinal midline aspect in the operating theatre which was found to have features of fundal submucosal myoma on visualization (Figure 2) and sent for histopathologic examination.



Figure 1: Gross appearance of prolapsed and inverted uterus with a regular firm intramural mass in the leading point of the prolapse (Myoma-see arrow).

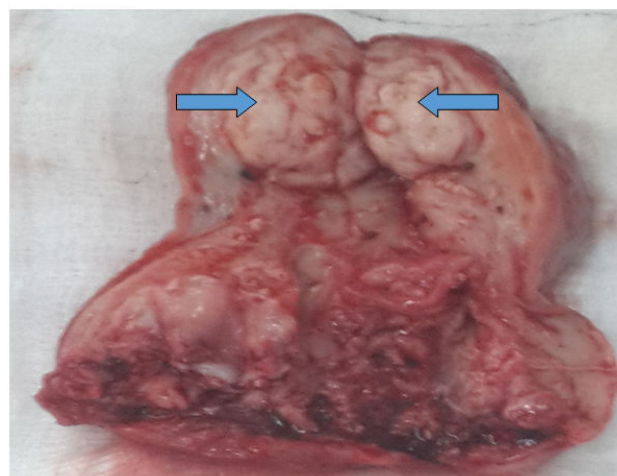


Figure 2: Gross appearance of cut section with clinical features of fundal sub-mucosal myoma-see arrow.

The post-op course was smooth and the patient was discharged on the 5th postoperative day appointed for re-evaluation on the 30th postop day and with no subjective complaint and objective evaluation.

The report of histopathologic examination; a gray brown firm globular mass measuring 5×6 cm with distorted lumen on cut section and with whorly like mass on gross appearance (Figure 3). On microscopy analysis of micro-section from the uterine wall involving nodule endomyometrium and cervix revealing leiomyomatous nodule comprising interlacing bundle of smooth muscle fibers along with fibrovascular stroma, focal areas of hyaline degeneration and chronic

inflammation and section through endomyometrium showed dense chronic inflammation with necrosis. Section through cervix shows keratinization of superficial layers of squamous epithelium with the final conclusion of Leiomyoma uterus with hyaline degeneration.



Figure 3: Gross appearance of cut section, distorted lumen with whorly like mass

Discussion

Chronic non-puerperal inversion of the uterus is rare, especially in postmenopausal period with only few case reports. Ninety seven percent of non-puerperal uterine inversions are associated with tumors, the commonest tumor being prolapsed myoma (80%), and 20% are secondary to malignant uterine pathology like leiomyosarcomas and endometrial carcinoma [1-4,13]. Hence histopathologic examination is imperative in the management of such cases. Gynecological uterine inversion emerges particularly in an over-aged group of women of reproductive age [2] and the age range of cases with non-puerperal uterine inversion among cases reported in different literature varied from 28 to 58 years.

However, this is the first reported case in our hospital on a para-II Ethiopian woman who was 70 years old and of this 25 years were in her postmenopausal period. Thus, in postmenopausal woman with vaginal mass we should not forget to see for uterine inversion [7]. The only identified cause of inversion of her uterine being a uterine pathology (degenerating submucous fundal myoma).

Some reports cite that the prolapsed fibroid in uterine inversion cases are infected and necrotized with inflammation of endometrium and the surrounding myometrium [3]. In a completely inverted uterus the uterine cervix will be invisible and flush with the vagina predisposing the cervix for super infection which can be overlooked. Our case do have super infection of the prolapsed part which was diagnosed clinically and treated with broad spectrum antibiotics and the histopathologic exam revealed that there was a dense chronic inflammation and necrosis of the endomyometrium.

The uterus when fully inverted generates tension on the vaginal wall, bladder, urethra and the urinary tract in general. As in our case this can cause the urethra to move from its normal anatomic location, inferior to the clitoris, to a sub-symphyseal location making localization of external urethral meatus difficult [3].

In general misdiagnosis of chronic non-puerperal uterine inversion for other benign and malignant gynecologic conditions is common [8].

The diagnosis is easier where a protruding mass is seen without definite margins of the cervix and absence of uterine body on bimanual or rectal examination. In other cases, the diagnosis can be difficult and the use of ultrasound or computed tomography is necessary. Magnetic resonance imaging (MRI) and computed tomography (CT) scan have been shown to be useful diagnostic tools [14,15].

Thus, high index of suspicion and clinical diagnosis of non-puerperal uterine inversion should be the rule especially in resource poor countries where CT and MRI are not available.

Many surgical techniques have been described in the management of non-puerperal uterine inversion, abdominally those of Huntington and Haultain, and vaginally those of Kustner and Spinelli [10-12].

Even though; it was our initial encounter in managing such type of case, numerous attempts to perform the Huntington technique to revert the uterus supported by pressure per vaginam which was unsuccessful and thus we did the surgery per vaginam successfully. The patient had smooth postop course and discharge home on her 5th post-op day.

Conclusion

Chronic non-puerperal inversion of the uterus is uncommon especially after many years of life in the postmenopausal period. In literatures, there were few case reports of chronic non-puerperal inversion of the uterus especially in the post-menopause. Thus, its diagnosis should be based on high index of suspicion regardless of the age of the women.

Even though myoma is the leading cause of non-puerperal uterine inversion, histopathologic examination is prudent for the possibility of its occurrence secondary to uterine malignancy which is more common at this age.

Cases with non-puerperal inversion of the uterus can have super infection, ulceration and necrosis of the prolapsed mass. Thus it should be suspected and managed with broad spectrum antibiotics and local wound care.

Encounter of such cases by the gynecologist can be for the first time and the possibility of encountering difficulty when attempting restoration of the uterus in to its position for subsequent procedure should be anticipated. Abdominal hysterectomy may be necessary, taking care to locate the distal ureters.

Ethical Consideration

Informed consent was obtained from the patient for the images (taken before, during and after the pre procedure) and using here case for publication.

Acknowledgement

Dejene Asefa: Developed conception and design, acquisition of data, analysis and interpretation of data. Drafted the manuscript; and have given final approval of the version to be published.

Nadia Yimar: Made significant contribution to the initial conception and design and accusation data. She has also revised the manuscript.

Competing Interests

We declare that we have no competing interests in the publication of this case

References

1. Shivanagappa M, Bhandiwad A, Mahesh M (2013) A Case of Acute on Chronic Uterine Inversion with Fibroid Polyp. *Journal of Clinical and Diagnostic Research* 7: 2587-2588.
2. Atalay MA, Demir BC, Solak N, Atalay FO, Küçükörmürcü S (2013) An unusual presentation of a submucous leiomyoma accounting to a non-puerperal uterine inversion. *J Turkish-German Gynecol Assoc* 14: 116-118.
3. Kilpatrick CC, Chohan L, Maier RC (2010) Chronic nonpuerperal uterine inversion and necrosis: a case report. *J Med Case Rep* 4: 381.
4. Katdare P, Valecha SM, Gandhewar M, Dhingra D (2013) Chronic Non-Puerperal Uterine Inversion: Recommendations for Diagnosis and Management. *Global Journal of Medical research Gynecology and Obstetrics* 13: 45-47.
5. Rudra BS, Naredi N, Duggal BS, Seth A (2010) Chronic Uterine Inversion: A Rare Complication of Mismanaged Labour. *Indian Journal of Applied Research* 3: 91-92.
6. Gomathy E, Agarwal Y, Sreeramulu PN, Sheela SR (2011) Non-puerperal uterine inversion with an ovarian tumor -a rare case. *Int J Pharm Biomed Res* 2: 74-75.
7. Takano K, Ichikawa Y, Tsunoda H, Nishida M (2001) Uterine inversion caused by uterine sarcoma: a case report. *Jpn J Clin Oncol* 31: 39-42.
8. Darji P, Banker H, Gandhi V, Thakkar G (2012) Postmenopausal woman with vaginal mass: do not forget to see for uterine inversion. *BMJ Case Reports*.
9. Umeononihu OS, Adinma JI, Obiechina NJ, Eleje GU, Izuchukwu udegbunam O, et al. (2013) Uterine leiomyoma associated non-puerperal uterine inversion misdiagnosed as advanced cervical cancer: A case report. *International Journal of Surgery Case Reports* 4: 1000-1003.
10. Lascarides E, Cohen M (1968) Surgical management of nonpuerperal inversion of the uterus. *Obstet Gynecol* 32: 376-381.
11. Haultain FWN (1901) The treatment of chronic uterine inversion by abdominal hysterectomy, with a successful case. *Br Med J* 2: 974-976.
12. Huntington JL, Irving FC, Kellogg FS (1928) Abdominal reposition in acute inversion of the puerperal uterus. *Am J Obstet Gynecol* 15: 34-40.
13. Mwinyoglee J, Simelela N, Marivate M (1997) Nonpuerperal uterine inversions. A two case report and review of literature. *Central African J Med* 43: 268-271.
14. Salomon CG1, Patel SK (1990) Computed tomography of chronic nonpuerperal uterine inversion. *J Comput Assist Tomogr* 14: 1024-1026.
15. Lewin JS1, Bryan PJ (1989) MR imaging of uterine inversion. *J Comput Assist Tomogr* 13: 357-359.