CASE REPORT

A rare and unexpected case of retained foetal bone after an unsafe abortion

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Abstract

Unsafe abortion is one of the most neglected healthcare problems in developing countries. One of the rare complications of unsafe abortion is retained foetal bone. Prevalence of disease is around 0.15% among patients undergoing diagnostic hysteroscopy. Patients have no specific symptoms. Case reports have focused on subfertility, abnormal uterine bleeding, lower abdominal pain, abnormal vaginal discharge, dyspareunia, dysmenorrhoea and spontaneous passage of bony fragments. Retained foetal bone fragments may cause acute pelvic inflammatory disease in rare cases regardless of the time interval after abortion. This condition can also present as recurrent vagitinis or endometritis refractory to ampirical antimicrobial treatment. In such cases, foreign body in uterine cavity should be kept in mind. Such patients should primarily be evaluated by ultrasonography which has substantial clinical importance in differential diagnosis of these cases. We present a case of misdiagnosed retained foetal bone complicated with recurrent vaginal discharge and acute pelvic inflammatory disease.

Keywords: Pelvic pain, Retained foetal bone, Recurrent vaginal discharge.

Introduction

Unsafe abortion is one of the most neglected healthcare problems in developing countries. It is an important problem to women during their reproductive lives.[1] It is estimated that, annually 20 million unsafe abortions are performed by unskilled personnel worldwide.[2] Besides, 78,000 estimated deaths occur from unsafe abortion per year and nearly half of these are in Asia.[3] One of the complications of unsafe abortion is retained foetal bone. The presence of foetal bone within the uterine cavity is a very rare form of foreign bodies in uterus and may cause serial complications affecting the woman's future fertility. The exact incidence and aetiology is unknown. Prevalence of disease is around 0.15% among patients undergoing diagnostic hysteroscopy.[4] It accounts for 11.9% of foreign bodies removed from uterus by hysteroscopy of patients undergoing infertility treatment.[5] The diagnosis is seldom made before the surgery. In the literature, foetal bone fragments have been identi?ed as early as 8 weeks and up to 15 years after pregnancy termination and are usually associated with a history of spontaneous or induced abortion.[6,7] Patients generally have no specific symptoms. Case reports have focused on subfertility, abnormal uterine bleeding, lower abdominal pain, dyspareunia, dysmenorrhoea and spontaneous passage of bony fragments.[7,8] Vaginal discharge, especially persistent form, is very rare; therefore it is generally neglected in these cases. This may account for the delay in diagnosis. Clinicians need to impress upon patients the necessity of completing full course of therapy and the importance of close clinical follow-up.[9] It is important to consider this rare possibility in patients with risk factors, especially in cases with a past history of termination of pregnancy. Foetal bone fragments in uterine cavity may also present as a rare cause of recurrent vaginitis and pelvic inflammatory disease (PID).

Here we present a rare case of misdiagnosed retained foetal bone in uterus, complicated with recurrent vaginitis and PID three years after termination of pregnancy.

Case Report

A 26-year-old multiparous woman was referred to our department with irregular vaginal bleeding, lower abdominal pain and chronic vaginal discharge. She had a history of induced abortion three years ago. She described an unsafe abortion episode. Her medical history revealed irregular menstrual cycles and minimal dysmenorrhoea for a year. She repeatedly approached her family physician with chronic vaginal discharge complaint. She had been empirically treated for vaginitis and pelvic infection. None of these treatments were based on a documented cause of PID or sexually transmitted disease (STD). She had never been evaluated with pelvic or transvaginal ultrasonography after abortion. Her first general physical and pelvic examinations were performed in our hospital. On pelvic examination, the uterus was normal in size and position.

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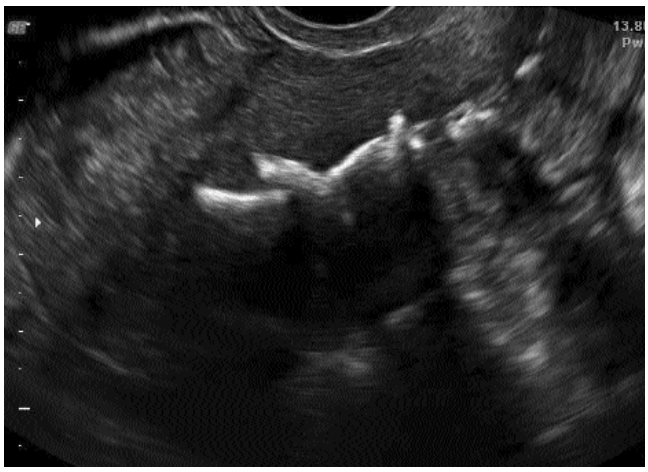

Figure-1: Several linear intensely echoic structure filling the cervical canal and endometrial cavity till the fundus.

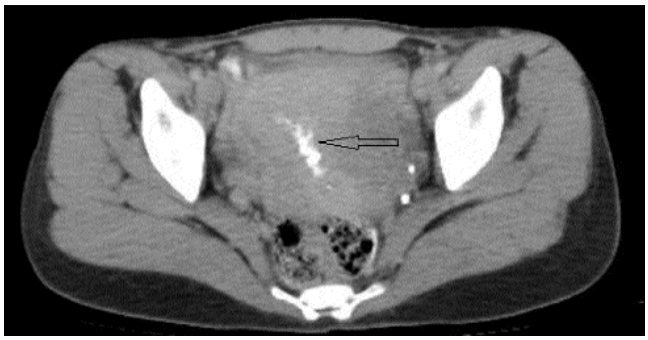

Figure-2: Black arrow: ecogenic linear materials in uterin cavity.

The uterine and adnexal tenderness, and purulent vaginal discharge suggestive of PID was detected on pelvic exam. Transvaginal ultrasound revealed several linear intensely hyperechoic structure filling the cervical canal and endometrial cavity till the fundus and minimal fluid collection was detected in the Pouch of Douglas (Figure-1). There was no history of intrauterine device insertion. For differential diagnosis of acute abdominal pain, direct abdominal X-ray and computerised tomography (CT) were performed. On CT, calcified structures were detected in cervical canal and uterine cavity (Figure-2). Our preliminary diagnosis was foreign body in uterus complicated with acute PID. After two weeks of treatment with doxycycline and metronidazol, the patient's informed consent was obtained and hysteroscopy was performed. A large amount of thin, calcified, coral-like bony materials were seen (Figure-3). The structures were removed by using bipolar hysteroscopic resectoscope. The rest of endometrial cavity appeared normal. Macroscopic appearance was compatible with the foetal

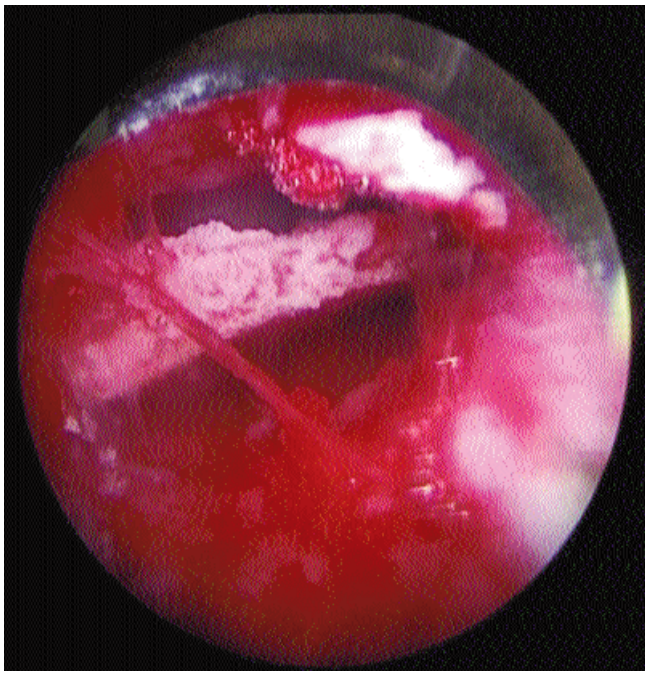

Figure-3: Thin, calcified, coral-like bony materials on hysterescopic evaluation.

bone. Histological examination revealed mature necrotic bone with multiple areas of bone marrow formation, including megakaryocytes. The patient was discharged 3 days after hysteroscopy. After 3 months, the patient had no complaint.

Discussion

The presence of foetal bone within the uterine cavity is one of the rarest types of foreign bodies in uterus. The exact incidence and aetiology remains obscure. It usually develops secondary to spontaneous miscarriages, missed, incomplete or therapeutic abortions that has occurred at $\geq$3 months' gestation following endochondrial ossification.[10] Intrauterine bony structures are often discovered fortuitously on routine ultrasound examination. The complaints reported in patient with foetal bone in cavity are usually related to subfertility, irregular vaginal bleeding, cervicitis, dyspareunia, pelvic pain and spontaneous passage of foetal bones. Retained foetal bones are supposed to increase the production of menstrual prostaglandins. Elevated levels of menstrual prostaglandin E (PGE) and prostacycline levels have been reported in cases with retained foetal bone and which decreased after removal of the foreign material. It has the same mechanism as an intrauterine contraceptive device.[11] Implantation of a blastocyst, sperm mobility and milieu of the uterine cavity are also affected. So foetal bones were especially detected during infertility

investigation. The increase in the level of PGE may also be associated with menstrual function, pelvic pain and dysmenorrhoea.[7] Our patient had a history of irregular periods before, and hormonal therapy and antibiotics were used previously for the suspicion of endometritis and persistent vaginal discharge. The patient was admitted to the family physician with various complaints, and since the complaints were not specific, an accurate diagnosis was missed. Transvaginal ultrasonography (TVUSG) may raise some signs that enable a correct diagnosis. Presence of intrauterine echogenic area on TVUSG should alert the physician. Differential diagnosis of such unusual findings includes intrauterine devices (IUD), Asherman's syndrome, calcified submucous fibroids, foreign bodies and mixed mesodermal tumours. A diagnosis of Asherman's syndrome dependent on the presence of an irregular echogenic focus with calcification, especially represents with amenorrhoea or hypomenorrhoea. Asherman's syndrome was excluded, since our patient had no history of hypomenorrhoea or amenorrhoea. Calcification is intensely echogenic and causes acoustic shadowing. Retained products usually can be detected if an irregularly shaped, dilated endometrial cavity containing echogenic material is noted. Differential diagnosis is based on the presence of bone marrow in the fragments and past history of termination of pregnancy. In our case, histopathological examination and pregnancy termination history were compatible with the diagnosis. In literature search, we could not detect any case of acute PID secondary to retained foetal bones in uterus after several years. In this case, PID seemed to be a late complication of a foreign body in the uterine cavity. Suspicion and a detailed history have a key role for accurate diagnosis.[12]

For definitive diagnosis and treatment, hysteroscopy is the gold standard, and the same was true in our case. Removal of the retained bones by hysteroscopy has proven effective in symptomatic relief and restoring fertility. One study used gonadotropin-releasing hormone (GnRh) analogues before the procedure. It mentioned that preoperative drug therapy helped to see all the abnormal tissue and to remove these retained bones more easily.[4] In our case, we performed planned hysteroscopy in early proliferative phase after menstruation, and all abnormal tissues were removed hysteroscopicaly. There was no need for GnRH analogues.

Conclusion

Retained foetal bone fragments may cause acute PID in rare cases regardless of the time interval after abortion. This condition can also present as recurrent vagitinis or endometritis refractory to empirical antimicrobial treatment. Hysteroscopy which is the gold standard modality for evaluation of intrauterine pathologies can be used to make the exact diagnosis and is also the minimally invasive treatment of such cases.

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