

Retained fetal bone post abortion causing infertility

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Abstract

Fetal bone retention is a rare but under-diagnosed complication after abortion. If left untreated, it can cause menstrual dysfunction and secondary infertility. We present a case of a 39 year old woman who undergone abortion 20 years ago but suffered with secondary infertility due to retained fetal bone.

Title:

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Written consent has been obtained from the patient.

Introduction

Retained fetal bone fragment post abortion is a rare complication and it can be a cause of secondary infertility. (1) There is no widely available evidence for clinical signs of retained fetal bone fragment but thought to include dysmenorrhoea, menstrual irregularities, chronic pelvic pain and secondary infertility. (2) There is currently no agreed protocol or guidelines regarding the best management but most case reports and case series managed with hysteroscopic retrieval of the fetal bone fragment. We present a case of secondary infertility likely caused by retained fetal bone fragments, its challenges in diagnosis and discussion around current guidelines in diagnosis and managing such scenarios.

Case History

A 39 year old business manager was initially seen in general gynaecology clinic in 2018 with complaints of chronic pelvic pain and 2 years of infertility. Her pain is non-cyclical, spasmodic and often sudden onset. She is otherwise fit and well, only known to have recurrent herpes infection therefore taking acyclovir when needed. She has no drug allergy. She is active smoker, smoking 1-2 cigarettes/day and drinks 20 units of alcohol/week. She has BMI 31.8. Previous obstetric history revealed mid-trimester abortion 20 years ago with surgical dilatation and curettage (D&C) at 20 weeks. Transvaginal ultrasound investigation (Figure.1) showed heterogenous echotexture in the anterior fundal wall containing a cystic area 8mm in size ?aetiology. Impression from the clinic was irritable bowel syndrome (IBS) but need to rule out adenomyosis. Therefore MRI scan was booked to investigate further and mebeverine was prescribed.

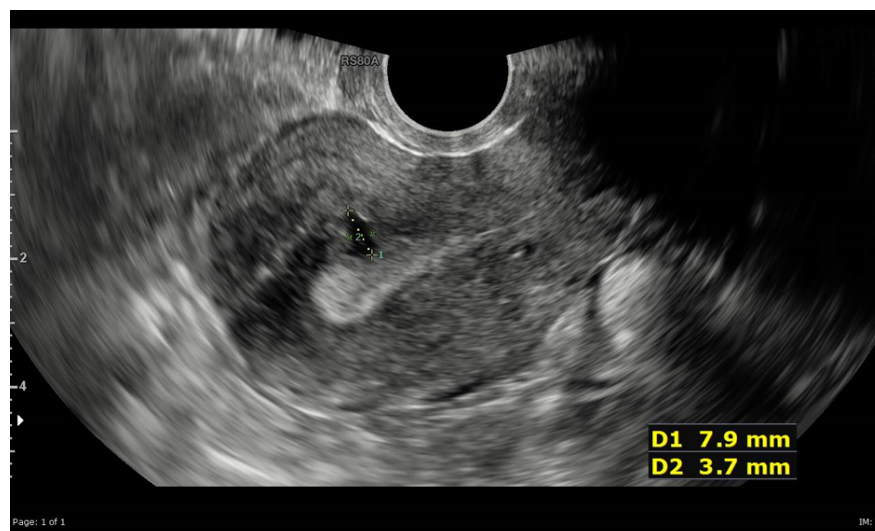


Figure. 1

She was seen again in gynaecology outpatient clinic in 2019, MRI(Figure.2) showed small fundal cystic structure ?leiomyoma ?adenomyoma. Ultrasound performed again showed ovulation. She is then seen in the infertility clinic, semen analysis is normal, smear test negative and chlamydia test negative. Hysterosalpingography (HSG) was organised but unable to cannulate the cervix. She is therefore referred to tertiary fertility centre.

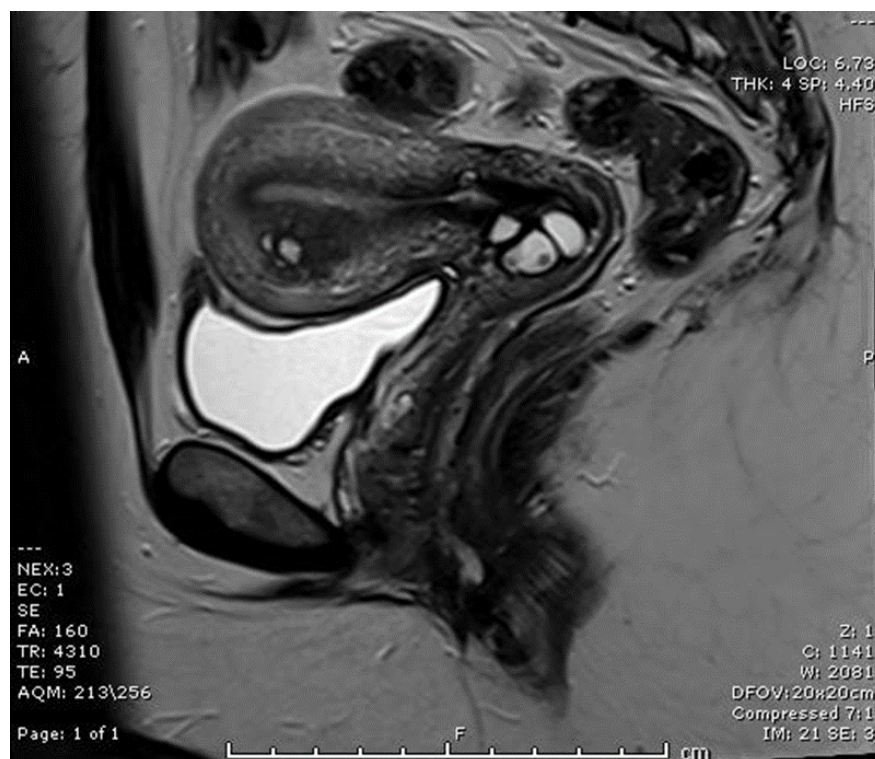


Figure.2

Unfortunately, tertiary referral was declined because both parents are active smoker. Smoking cessation advice given.

She then present back to general gynaecology clinic in 2020 with chronic pelvic pain on the left side, dysmenorrhea and menorrhagia. She was booked for diagnostic laparoscopy and dye test. While waiting for the operation, she had repeat pelvic ultrasound (Figure. 3), which showed a linear, highly reflective structure within the endometrial cavity adjacent to the cervix 18mm x 3mm ?foreign body. Evidence of adenomyosis noted and the endometrium looks normal.



Figure.3

Hysteroscopy and diagnostic laparoscopy with dye test done in 2021. Cervix was noted to be pin-hole and very difficult to dilate, foreign body was seen and removed from the endometrial cavity, the endometrial cavity otherwise looks normal. Laparoscopy revealed left sided physiological adhesion of bowel to the pelvic side wall, left tube looks inflamed but both tubes are positive for dye test and both ovaries look normal. Histology of the foreign body showed fragments of dead bone.

Discussion

This case highlights the difficulty in diagnosing the cause of her secondary infertility and abdominal discomfort because the first ultrasound scan as well as the MRI scan did not show any foreign body inside the endometrium. Potential differential diagnosis may include osseous metaplasia driven by chronic inflammation causing dystrophic calcification (3) and endometrial ossification driven by chronic inflammation as well as tissue destruction in mature endometrial stroma. (4) The fact that the segment retrieved from hysteroscopy looks like a fetal long bone and the histology showed dead bone fragment and no active tissue goes against these two differential diagnosis.

Fetal bone fragment residing in the endometrium can act as a foreign body causing chronic inflammation to the endometrial environment, inhibiting implantation of the embryos and therefore cause secondary infertility. The effect is similar to having an IUCD in situ. It is also suggested that the fetal bone may have a direct toxic effect to the developing embryo therefore causing infertility. (4)

Currently, hysteroscopy is used in most of the case reports as the treatment of choice to retrieve foreign body to either treat the infertility (1-4) or menstrual complaints, including chronic pelvic pain. (5) However, there is lack of guidance nationally as to the gold standard investigations or treatment. In fact, there is lack of evidence in follow up in abortion care in general. The NICE guideline (6) as well as the best

practice in abortion care provided by the college (7) did not provide specific guidance regarding symptoms and signs for incomplete abortion especially post mid-trimester abortion. There is also lack of guidance on how to investigate suspected incomplete abortion. With the current situation where more than 70% of abortion is done in the private sectors, (6) it is understandably difficult to follow such patients up and to communicate with the primary and secondary care providers regarding the treatments they have gone through. However, as retained fetal tissue and bones can cause a number of menstrual as well as fertility problems in ladies, it is important to obtain a detailed obstetric history including abortion and bear in mind such differential diagnosis. There is also a need to review the current guideline to provide guidance in terms of early recognition, investigation and appropriate treatment and follow up to these women, especially when abortion rate is on the rise with current pandemic. (8)

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