

Case Report- **Gynaecology and Obstetrics**

AN EFFECTIVELY HANDLED CASE OF ABNORMAL UTERINE BLEEDING DUE TO RETAINED INTRAUTERINE BONY FRAGMENTS: A RARE CASE REPORT

Shweta Sharma¹, Mohit Gaur², Deepa Singh³

Gynaecology and Obstetrics, University college of medical sciences and GTB hospital, Delhi.

***Corresponding author details:** SHWETA SHARMA. Gynaecology and Obstetrics, University college of medical sciences and GTB hospital, Delhi. Email: sharmashwetasd@gmail.com) Mobile: 91 8510058670

Article Received on: 23-3-2024, Article accepted on: 15-5-2024, Article published on: 1-07-2024

ABSTRACT

Retained intrauterine fetal bone fragments are an unusual and rare disease condition, often underdiagnosed, with a reported incidence of 0.15% among diagnostic hysteroscopy. A 28-year-old P1L1A1 woman presented to the gynaecology clinic with complaints of abnormal uterine bleeding, persistent pelvic pain, and foul-smelling vaginal discharge for two months. After the confirmation of retained fetal bones, the patient underwent hysteroscopic removal of the retained bone fragments. The patient tolerated the procedure well. There were no immediate complications. She was given IV antibiotic coverage for two days and discharged on the third post-operative day. Retained fetal bones are a rare but reported and significant cause of abnormal uterine bleeding and pelvic pain after D&C procedures if done in the second trimester. It can lead to chronic endometritis, and abnormal uterine bleeding and may subsequently lead to infertility.

Key Words: intrauterine, hysteroscopic, bone fragments, antibiotic coverage

INTRODUCTION

Retained intrauterine fetal bone fragments are an unusual and rare disease condition, often underdiagnosed, with a reported incidence of 0.15% among diagnostic hysteroscopy[1,2] They have been reported majorly after second-trimester abortions. However, some cases are suspected to be due to metaplasia of mature endometrial stromal cells following chronic inflammation or trauma[2]. The most common cause of retained fetal bones is a complication of unsafe abortion[3]. There are no significant clinical signs of retained fetal bone fragments but symptoms include dysmenorrhea and other menstrual irregularities, chronic pelvic pain, and secondary infertility[4]. Some cases may be incidentally diagnosed on a sonogram or hysteroscopy. There are currently no protocols or guidelines for managing the retained fetal bones. However, most cases are managed successfully by hysteroscopic removal of the bone fragments.

CASE REPORT

A 28-year-old P1L1A1 woman presented to the gynaecology clinic with complaints of abnormal uterine bleeding, persistent pelvic pain, and foul-smelling vaginal discharge for two months. The patient described the bleeding as intermittent, irregular, and heavier than her normal menstrual cycle. She had lower abdominal pain which was irregular, spasmodic, and sometimes sudden in onset. She had foul-smelling vaginal discharge for two months. She had no history of fever. Her obstetric history included one normal vaginal delivery two years back and a history of dilatation and curettage (D&C) procedure about three months back performed in a private nursing home performed at 20 weeks of gestation. Her previous

menstrual cycles were regular. There was no history of any chronic illness. There was no addiction or drug allergy

On examination, the abdomen was soft with mild tenderness in the suprapubic region.

Per speculum examination revealed blood-stained foul-smelling discharge. The cervix and vagina were grossly normal. Per vaginal examination noted a slightly enlarged and tender uterus.

Urine pregnancy test was negative. Complete blood count (CBC) showed mild anemia (Haemoglobin: 10.0 g/dL).

Transvaginal ultrasound revealed dense intrauterine echogenicities with posterior acoustic shadow. (Figure. 1A & 1B). NCCT pelvis was done and showed chunky intrauterine calcifications (Figure. 2A & 2B)

MANAGEMENT

After the confirmation of retained fetal bones, the patient underwent hysteroscopic removal of the retained bone fragments. (Figure. 3) The procedure involved:

- Cervical dilatation followed by hysteroscopic visualization of the uterine cavity.
- Using grasping forceps and curettage, the bone fragments were removed carefully under direct vision.
- A thorough inspection of the uterine cavity was done post-removal to ensure complete evacuation of the retained tissue.

OUTCOME AND FOLLOW-UP

The patient tolerated the procedure well. There were no immediate complications. She was given IV antibiotic coverage for two days and discharged on the third post-operative day. She was monitored postoperatively for any signs of infection or hemorrhage. Follow-up was done after one week of

discharge. She reported resolution of the abnormal bleeding and pelvic pain. A follow-up ultrasound showed a normal endometrial cavity without any

retained fragments(Figure. 4). She was advised on the importance of prompt follow-up in future pregnancies.

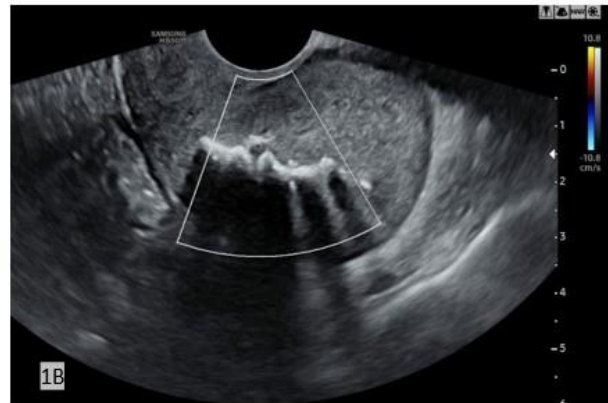
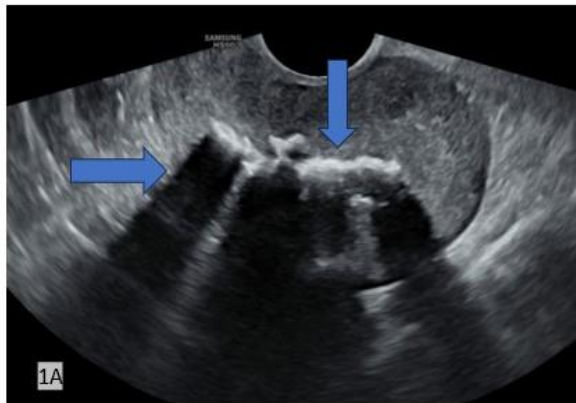


Figure 1(A). Transvaginal longitudinal USG images show a retroverted uterus with dense echoes in the endometrial cavity(vertical blue arrow) with excessive posterior acoustic shadowing(horizontal blue arrow) causing a nearly completely obscured posterior wall of the uterus. 1(B). Absence of obvious vascularity on Colour Doppler.

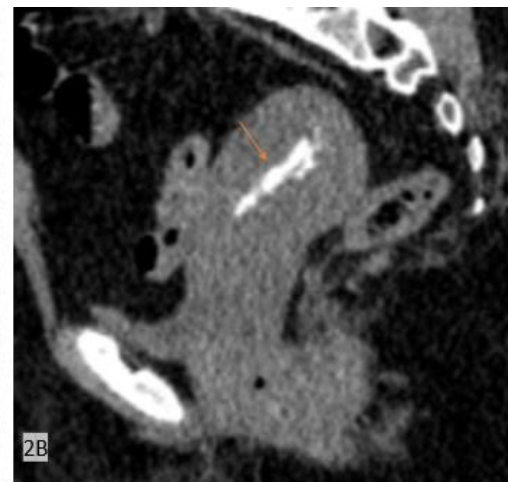


Figure 2A(Axial) & 2B(Sagittal) Multiplanar reconstruction NCCT pelvis images show a retroverted uterus with multiple chunky dense calcifications in the endometrial cavity. (Yellow arrow).



Figure 3. Hysteroscopically removed multiple variable-sized bony fragments.

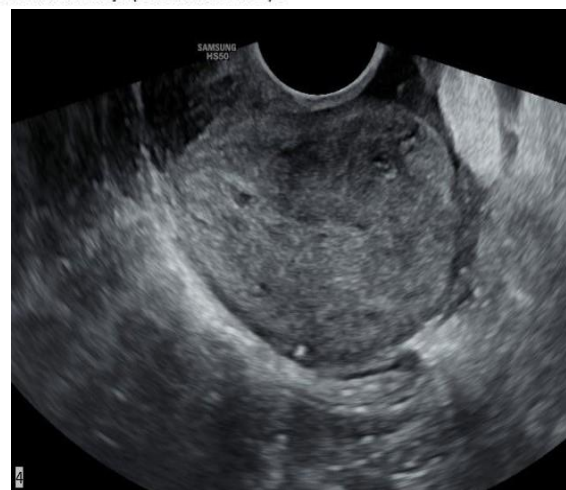


Figure 4. The endometrial cavity appears clear on follow-up transvaginal USG.

DISCUSSION

Retained fetal bones are a rare but reported and significant cause of abnormal uterine bleeding and pelvic pain after D&C procedures if done in the second trimester. It can lead to chronic endometritis, and

abnormal uterine bleeding and may subsequently lead to infertility

In 2018, Gainer et al. reported that 0.28% of women with infertility have an incidence of retained fetal bones [4]. It is a rare complication of unsafe abortion and is most common after the evacuation of second-trimester

miscarriage. It should be considered in all patients who develop abnormal uterine bleeding, dysmenorrhea, vaginal discharge, and infertility after pregnancy termination [4].

The most common etiologies of intrauterine fetal demise include genetic, infectious, thrombo-embolic conditions, and autoimmune diseases [5]. The most common causes of first-trimester abortions are genetic abnormalities such as aneuploidy and other chromosomal abnormalities, thrombophilic, and autoimmune. The etiologies of second and third-trimester abortions are autoimmune, uterine anatomic abnormalities (polyps, leiomyomas, septae, cervical incompetence, etc.), maternal hypertension, thrombophilia, and infection/inflammation [6].

As it was the case in the index case, patients with retained uterine fetal bones usually present with nonspecific clinical presentations which may include abnormal vaginal bleeding, abnormal discharge, secondary infertility, chronic pelvic pain, and dysmenorrhea [1,2]. In our case, the chief complaints were irregular vaginal bleeding, foul-smelling discharge, and abdominal cramps. A systematic review study involving 293 cases demonstrated that approximately 88% of patients had at least one prior surgical uterine evacuation related to pregnancy termination [7]. In the index case, the history of abortion was denied. However, a history of antecedent-induced abortion or curettage for spontaneous abortion is usually present. Various hypotheses have been proposed to explain the mechanisms that lead to the development of bone tissue within the uterus. These include dystrophic ossification or osseous metaplasia of endometrium, heterotopic intrauterine bone, ossification of post-abortive endometritis, metastatic calcification, prolonged estrogen therapy after abortion, genital tuberculosis, and retained fetal bones [8].

Retained fetal bone can cause multiple gynecological complaints such as metrorrhagia, menorrhagia, pelvic pain, foul-smelling leukorrhea, spontaneous elimination of bony fragments, and secondary infertility [4,9].

The main suggested diagnostic modality for patients with this rare condition is ultrasonography [10]. In the present case, the sonographic findings were suggestive, and later, the diagnosis was confirmed by the NCCT pelvis. The recommended treatment modality is hysteroscopic excision. However, non-hysteroscopic approaches such as biopsy, forceps, dilation and curettage, and hysterectomy have been documented. In our patient, hysteroscopic removal of the fetal bones was done. The patient was followed up and relief of symptoms following treatment was noted.

Awareness of this condition and its prompt management are important for timely diagnosis and treatment, preventing long-term sequelae like infertility.

CONCLUSION

This case highlights the importance of considering retained fetal bones in the differential diagnosis for abnormal uterine bleeding and pelvic pain after a pregnancy loss and D&C. Prompt intervention can alleviate symptoms and prevent further complications, ensuring better reproductive health outcomes for affected patients.

REFERENCES

1. Makris N, Stefanidis K, Loutradis D, Anastasiadou K, Hatjipappas G, Antsaklis A. The incidence of retained fetal bone revealed in 2000 diagnostic hysteroscopy. *JSLs*. 2006;10(1):76-77.
2. Okohue, J. (2019) The Incidence of Retained Fetal Bones after 1,002 Hysteroscopies in an Environment with Restrictive Abortion Laws. *Tropical Journal of Obstetrics and Gynaecology*, 36, 249-251. https://doi.org/10.4103/TJOG.TJOG_91_18.
3. Mremi, A., Mwidibo, Y., Mlay, J. and Mchome, B. (2023) Unusual Intrauterine Retained Fetal Skeletal Bony Fragments: A Case Report and Review of Literature. *Clinical Case Report*, 11, e7225. <https://doi.org/10.1002/ccr3.7225>
4. Gainer S, Arora P, Dhaliwal LK. Retained intrauterine bony fragments as a cause of secondary infertility in a tertiary level Indian hospital. *J Hum Reprod Sci*. 2018;11(3):286-290. doi: 10.4103/jhrs.JHRS_33_18
5. Takita H, Hasegawa J, Nakamura M, et al. Causes of intrauterine fetal death are changing in recent years. *J Perinat Med*. 2018;46(1):97-101. doi:10.1515/jpm-2016-0337
6. Thakur A, Basnet P, Rai R, Agrawal A. Risk factors related to intrauterine fetal death. *J Nepal Health Res Counc*. 2019;17(1):46- 50. doi:10.33314/jnhrc.1534
7. Khan SN, Modi M, Hoyos LR, Imudia AN, Awonuga AO. Bone in the endometrium: a review. *Int J Fertil Steril*. 2016;10(2):154-161.
8. Guerra LFA, Pessanha LB, Oliveira GA, Melo AMF, Braga FS, Souza RSM. Endometrial osseous metaplasia: sonographic, radiological and histopathological findings. *Radiol Bras*. 2016;49(1):62-63. doi:10.1590/0100-3984.2015.0032
9. Samraj S, Crawford S, Singh N, Patel R, Rowen D. An unusual case of pelvic pain: retention of fetal bone after abortion. *Int J STD AIDS*. 2008;19(5):353-354. doi:10.1258/ijsa.2007.007219
10. Chan NS. Intrauterine retention of fetal bone. *Aust N Z J ObstetGynaecol*. 1996;36(3):368-371. doi:10.1111/j.1479-828x.1996.tb02733.x