

## CASE REPORT

### Obstetrics

## Retained fetal bones causing recurrent per vaginal discharge and secondary infertility: A case report

Corrine Arara<sup>1\*</sup>, Sumayya M. Badamana<sup>1</sup>, James Amenge<sup>2</sup>

<sup>1</sup> Department of Obstetrics and Gynecology, University of Nairobi, Nairobi, Kenya.

<sup>2</sup> Department of Obstetrics and Gynecology, Kenyatta National Hospital, Nairobi, Kenya.

\*Correspondence: [corrinearara@gmail.com](mailto:corrinearara@gmail.com)

Received: 21 June 2021; Revised: 23 September 2021; Accepted: 28 September 2021; Available online: October 2021

Copyright © 2021, The authors. Published by JOGECA. This is an open access article under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted reuse, distribution, and reproduction in any medium provided the original author(s) and the source are properly cited.

### Abstract

**Background:** Retained fetal bones as a cause of infertility is uncommon. Treatment involves removal of the fetal bones, with resolution of symptoms and resumption to fertility reported.

**Case presentation:** A 31-year-old para 0+1 presented to the gynecological outpatient clinic with a two-year history of secondary infertility and recurrent vaginal discharge that began following a pregnancy loss at 22 weeks gestation. She had undergone labor induction, after which she was scheduled twice for evacuation of retained products of conception. She was managed for vaginal discharge until a repeat scan revealed

retained fetal parts and uterine fibroids a year later. Myomectomy was done, and fetal bones embedded in the myometrium and within the uterine cavity were removed.

**Conclusion:** Retained fetal bones diagnosis should be entertained in patients presenting with a history of per vaginal discharge or secondary infertility following a miscarriage. The role of pelvic scan and hysteroscopy in evaluating these patients cannot be over-emphasized.

**Keywords:** retained fetal bones, secondary infertility, vaginal discharge

### Introduction

Infertility remains one of the significant gynecological issues. The causes of female infertility include ovulatory disorders, tubal factors, and uterine abnormalities (1). Retained fetal bones (RFB) as a cause is uncommon (2). The typical presentation of patients with RFB includes secondary infertility, chronic pelvic pain, vaginal discharge, and abnormal uterine bleeding (3-5). Diagnosis is made mainly via ultrasonography and hysteroscopy (5,6). Treatment involves the removal of the fetal bones with the resolution of symptoms and resumption to fertility reported (7).

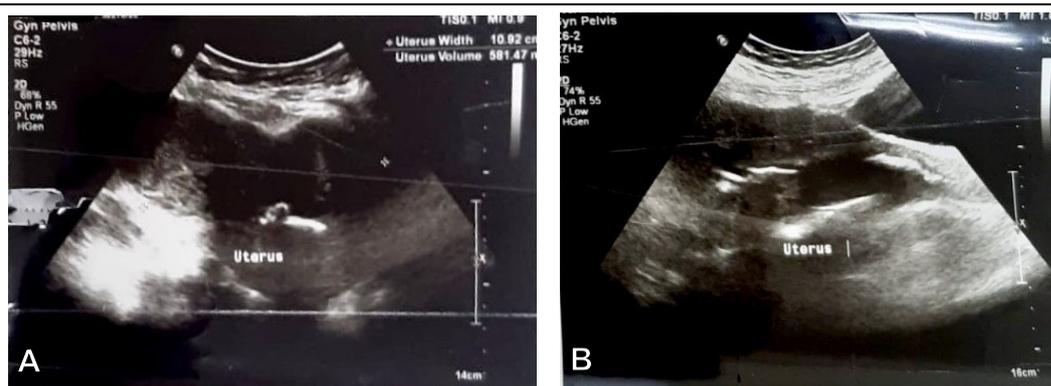
### Case presentation

A 31-year-old para 0+1 presented to the gynecological outpatient clinic at the Kenyatta National Hospital (KNH) with a two-year history of secondary infertility and recurrent vaginal discharge following a pregnancy loss at 22 weeks gestation. She also had a history of myomectomy done four years prior to her current presentation due to symptomatic uterine fibroids causing heavy menses. During the antecedent pregnancy, she presented with intrauterine fetal demise at 22 weeks, after which induction of labor was initiated, and she expelled some fetal parts and bones. A pelvic scan revealed retained products of conception (RPOC). She was scheduled for dilatation and curettage (D&C), where 100 mls of placental tissue and bones were evacuated using a

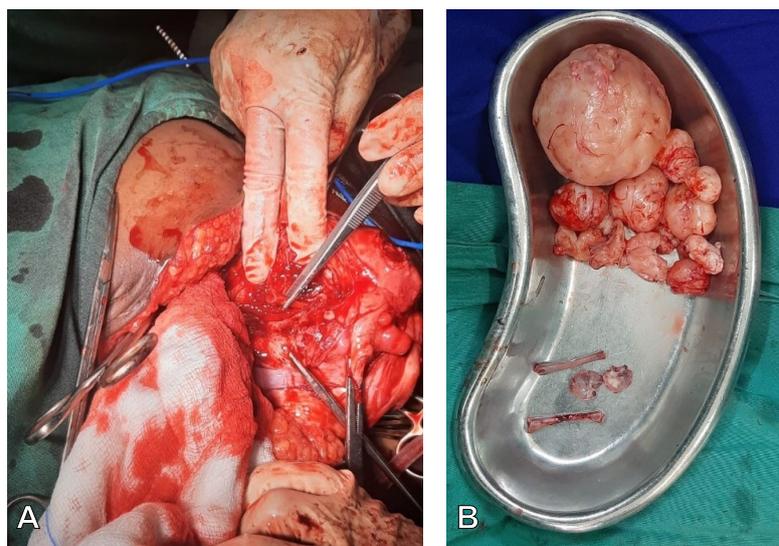
sponge holding forceps. She returned three weeks later with severe lower abdominal pain and persistent vaginal bleeding. A repeat pelvic ultrasound showed retained products of conception, placenta, and fetal parts in the uterine cavity and cervical canal. During the second evacuation, placental tissue and fetal bones were evacuated piecemeal from the cervical region; they were noted to be foul-smelling. After evacuation, a pelvic scan showed minimal RPOC, so she was given sublingual misoprostol and then discharged on antibiotics and analgesics.

During follow-up in the outpatient clinic, she reported recurrent per vaginal discharge that was copious in amount for which she had been treated with antibiotics with no reprieve. A pelvic scan revealed features consistent with endometritis and multiple uterine fibroids. High vaginal swabs were done; first growing *Klebsiella pneumoniae* and *Acinetobacter baumannii*, then *Escherichia coli*, and she was treated with antibiotics each time. Her menses were regular, but she had been unable to conceive. A year later, a repeat pelvic scan reported

fragmented intrauterine components suggestive of fetal parts and multiple uterine fibroids. She was therefore counseled for a repeat myomectomy and hysteroscopic removal of fetal parts. On admission, the patient was in generally fair condition. Her vital signs were unremarkable. The uterus was palpable at 16 weeks, non-tender. Speculum examination revealed copious brownish discharge, non-foul smelling. Her hemoglobin, platelets count, white blood cell (WBC) count, and renal function tests (RFTs) were within the normal ranges. She was scheduled for an open myomectomy. Intraoperatively, multiple myomas were seen. A posterior vertical incision was made, and in removing a large myoma, the endometrial cavity was breached, and fetal bones were found in the uterine cavity. Two femurs and two iliums were removed, one of which was embedded in the myometrium. The repair was done in layers, and hemostasis was achieved. Postoperatively, the patient reported less heavy menses, and the vaginal discharge was absent. At the writing of this case report, she was on preconception medications, attempting to conceive.



**Figure 1: A and B:** Pelvic ultrasound images showing fetal bones in the uterine cavity



**Figure 2: A:** During open myomectomy, the endometrium was breached, revealing the retained fetal bones. **B:** Appearance of myomas and fetal bones

## Discussion

This case report highlights two of the complications that arise from retained fetal bones. The patient had a second-trimester miscarriage for which dilatation and curettage did not evacuate all the products of conception, a common side effect with the evacuation at this gestation (5). A hysteroscopy done later led to the evacuation of some bones, yet some were still retained. This diagnosis should be entertained in all patients presenting with secondary infertility, abnormal uterine bleeding, dysmenorrhea, or vaginal discharge having had a previous pregnancy termination (8,9). There are reports of asymptomatic cases despite retained fetal bones. Such was discovered when performing a routine fertility assessment while doing a pelvic ultrasound (7).

Secondary infertility is a common complication of retained fetal bones. The mechanism of action of infertility may be 1) the presence of a foreign body acting as an intrauterine device (IUD) or causing uterine synechiae and 2) the presence of fetal bones at the site of blastocyst implantation acting as an IUD, which can lead to an increase in endometrial prostaglandins (PG-E and F<sub>2</sub> alpha) leading to impaired implantation (2). The retained bony fragments can cause bacterial colonization in the endometrium leading to pelvic inflammation, vaginal discharge, and chronic pelvic pain (10). This might have been the case in this case as she had chronic per vaginal discharge. It is imperative to have a high index of suspicion in managing such patients for secondary infertility with a previous history of second-trimester miscarriage.

Diagnosis using transvaginal ultrasound (TVUS) is the mainstay modality in evaluating pelvic pathology without resorting to invasive procedures (5). Hysterosalpingography forms part of the diagnostic panels in evaluating an infertile patient. However, it has not been shown to aid much in diagnosing RFB. After passing the dye, the bones are covered and are no longer visible in the x-ray. Hysteroscopy has both diagnostic and therapeutic value, and it is regarded as the gold standard in treatment as it there is the evacuation of the RFB under direct visualization. The drawback to this is the cost implication and unavailability of these services in low-resource settings. In addition, in cases of partially or totally embedded fetal bones in the endometrium or myometrium, this may pose an evacuation challenge. Blind dilatation and evacuation followed by ultrasonographic evaluation after the procedure are fairly satisfactory (7). Treatment involves complete evacuation of all the bones. The resolution of symptoms and

resumption to fertility has been reported as most patients conceive soon after (10).

## Conclusion

Retained fetal bones diagnosis should be entertained in patients presenting with a history of per vaginal discharge or secondary infertility following a miscarriage. The role of pelvic scan and hysteroscopy in evaluating these patients cannot be over-emphasized.

## Consent for publication

Informed consent for publication was obtained from the patient.

## Acknowledgement

Special appreciation to my colleague, Dr. Sumayya, for her help in compiling this case report and my consultant, Dr. Amenge, for his guidance during the writing process.

## Declarations

### Conflict of interests

The authors declare no conflicts of interest.

### Funding

None

## References

1. Practice Committee of the American Society for Reproductive Medicine. Diagnostic evaluation of the infertile female: a committee opinion. *Fertil Steril*. 2015;103(6):e44-e50. doi:10.1016/j.fertnstert.2015.03.019
2. Dawood MY, Jarrett JC 2nd. Prolonged intrauterine retention of fetal bones after abortion causing infertility. *Am J Obstet Gynecol*. 1982;143(6):715-717. doi:10.1016/0002-9378(82)90120-x
3. Bougie O, Acharya V, Haebe J, Singh SS. Endometrial ossification causing secondary infertility. *J Obstet Gynaecol Can*. 2014;36(6):473. doi:10.1016/S1701-2163(15)30556-9
4. Kalu E, Richardson R. Retained foetal bones: an intrauterine cause of chronic pelvic pain. *Arch Gynecol Obstet*. 2009;279(2):233-234. doi:10.1007/s00404-008-0686-4
5. Hameed F, Shuja S. Retained Fetal Bones: Rare cause of Abnormal Uterine Bleeding. *Pak J Med Sci*. 2020;36(1):S91-S93. doi:10.12669/pjms.36.ICON-Suppl.1719
6. Makris N, Stefanidis K, Loutradis D, Anastasiadou K, Hatjipappas G, Antsaklis A.

- The incidence of retained fetal bone revealed in 2000 diagnostic hysteroscopies. *JSLs*. 2006;10(1):76-77
7. Humane A, Agrawal N. Intrauterine retention of fetal bones, a cause for secondary infertility. *Int J Reprod Contracept Obstet Gynecol* 2019;8:4101-3
  8. Chan NS. Intrauterine retention of fetal bone. *Aust N Z J Obstet Gynaecol*. 1996;36(3):368-371. doi:10.1111/j.1479-828x.1996.tb02733.x
  9. Virmani S, Pandey D, Inukollu P, Shetty J, Sardesai I. Retained foetal bones with recurrent vaginal discharge: A case report. *Journal of Clinical and Diagnostic Research*. 2017 Nov 1;11(11):4-5. <https://doi.org/10.7860/JCDR/2017/31532.10918>
  10. Usha Kiran TS, Bhal PS. The potential consequence of early recognition and treatment of retained fetal bony fragments. *J Obstet Gynaecol*. 2002;22(4):443-444. doi:10.1080/014436102320261177