

Retained fetal bones following termination of pregnancy mistaken for an intrauterine contraceptive device

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Case report

A 33-year-old woman of non-UK origin who travelled frequently in her job presented complaining of chronic pelvic pain over the previous 4 years with intermittent exacerbations. The pain was situated mainly in the suprapubic region, was unrelated to her periods or to sexual intercourse and had not been relieved by routine analgesics. She had had two surgical terminations of pregnancy (TOPs), at 14 and 21 weeks' gestation, 10 years and 8 years previously. She did not disclose the background to these late terminations. She used a combined oral contraceptive pill for contraception for the past 4 years.

Following an acute exacerbation of pain in her home country, the patient had been investigated with an ultrasound scan, which had suggested the presence of an intrauterine device (IUD).

At the family planning clinic a nurse practitioner was unable to see the threads of the supposed IUD and the patient was therefore referred to the clinic dealing with difficult problems in the Department for Sexual and Reproductive Health. She presented a copy of the ultrasound scan image from her home country, but no written report. Although the single image of one plane of this transvaginal scan showed a structure with the appearance expected with an IUD, the history and the absence of a thread suggested further investigation.

Abdominal examination revealed no masses or tenderness. The vulva and vagina looked normal and no IUD thread was seen at the cervical os. Bimanual examination was entirely normal. Given the evidence of the original scan image, the gestation at the second TOP, the patient's certainty that no intrauterine contraceptive device had then been inserted and the continuing pelvic pain, a further ultrasound scan was performed to clarify the diagnosis. This demonstrated highly echogenic linear structure, although not as straight or regular as would be expected with an IUD (Figure 1). The differential diagnosis was retained fetal bones or an unusual IUD. The first diagnosis was considered more likely because of the kinked linear appearance with irregularly increased thickness.

It was explained to the patient that given her history and the available evidence, the echogenic appearance might have arisen from retained fetal bones following the second TOP. She agreed to investigation and consented to an



Figure 1 Transvaginal ultrasound scan showing highly echogenic linear structure within the endometrial cavity (photograph courtesy of Dr Jackie Ross)

attempt to remove the echogenic source under local anaesthesia.

After preparing the patient for examination with aseptic precautions, 2.5 ml prilocaine 3% was injected into the 9 o'clock and 3 o'clock positions of the cervix using a 22-gauge needle. Under ultrasound guidance careful sounding of the uterine cavity revealed a grating sensation. It was therefore probable that the echogenic source was a foreign body (which could have been an IUD or fetal remains) or calcification of intrauterine tissue. Using alligator forceps, a careful attempt was made to remove the object but only partial removal was possible due to the patient's discomfort. Removal was therefore completed under general anaesthesia with hysteroscopic guidance.

On gross examination the object removed proved to be flat bone in four or five pieces, each of 1.0–1.2 cm diameter with serrated edges, suggestive of cranial bones. Histology revealed non-viable bone. A repeat ultrasound scan showed complete clearance of the uterine cavity. On follow-up it was apparent that removal of the retained fetal bones had resulted in complete resolution of the chronic pelvic pain.

Discussion

This case presented several unusual features. Retention of fetal bone is a rare complication of abortion and, when it occurs, rarely constitutes a cause of pelvic pain.¹ In the majority of cases described in the literature the discovery of retained fetal bones arises in the course of investigation of reduced fertility, where fetal bone retention is a well-described cause.² Other sequelae of retained fetal bones include dysmenorrhoea and dysfunctional uterine bleeding³ or menorrhagia.⁴ The chronic pelvic pain complained of by the patient did not therefore suggest retained fetal bone as a cause.

The case history recorded two TOPs, both after the thirteenth week. Retention of fetal bony fragments most commonly arises after operative second-trimester or late first-trimester TOPs. In later mid-trimester abortions, instrumentation tends to detach the fetal trunk and the skull may have to be crushed as removal of the fetal head may be difficult.⁵ The detailed case history is an important

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diagnostic tool given the close link between prior TOP and retained fetal bone. There are other rare causes for the occurrence of bone in the uterus. They include bony metaplasia of the endometrium, osseous heteroplasia, and dystrophic calcification and ossification of the endometrium.⁶

If the fetal bones had been retained from the patient's second TOP in 1995 until she presented in 2004, they must have been *in situ* for 9 years. Long-term retention is unusual but not unknown, with periods of 2.6 to 17 years⁸ reported in the literature.

Conclusion

Unfamiliar echogenic patterns on ultrasound scans should be scrutinised with care and considered in the light of the patient's history as possible indications of unusual abnormalities.

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Authors' note

Several unsuccessful attempts were made to contact the patient to secure her consent for publication. The patient's occupation may mean that she is now resident outside the UK.

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