Case report

Hysteroscopic retrieval of numerous retained fetal bones 6 years post mid-trimester abortion: A case report

Abstract.

Prolonged intrauterine retention of fragments of fetal bone or skeleton after an intrauterine fetal death, missed, spontaneous, incomplete or therapeutic abortion is rare and as such not poorly reported.

Prolonged retention of intrauterine bone or bone fragments is an established cause of secondary infertility from recurrent endometritis and subsequent Asherman's syndrome or bilateral tubal blockage. Transvaginal sonography is the ideal screening modality for evaluating the uterus of a women with secondary infertility with a history of mid trimester pregnancy termination. A diagnostic hysteroscopy followed by an operative procedure is the procedure of choice for treatment. Hysteroscopy allows for the least aggressive, less complicated, fertility sparing therapy.

We present a case of retained numerous fetal bone particles after 6 years of mid trimester abortion seen as endometrial echogenicity on transvaginal ultrasound scan and retrieved via the use of hysteroscopy.

Keywords: Retained Fetal bone, mid trimester abortion, hysteroscopy, secondary infertility

Introduction

Prolonged intrauterine retention of fetal bone fragments or skeleton after an intrauterine fetal death, missed, spontaneous, incomplete or therapeutic abortion is rare and likely to be under reported. [1,2,3.]

The most common theory of uterine ossifications is the retention of fetal bones following either of spontaneous, missed, incomplete or criminal abortions at a time when endochondral ossification should have occurred at 12 weeks gestation or more [3, 4.] Another plausible explanation is the metaplasia of endometrial stromal cells into cartilaginous and bony tissue in the absence of an antecedent pregnancy has been postulated to occur as a response to chronic endometritis, trauma, vitamin deficiency or prolonged oestrogen

stimulation.[4, 5] However, most cases endometrial ossifications are believed to be retained bone fragments following termination of pregnancy. Retained fetal bone can cause

endometritis and subsequent blockage of the Fallopian tubes which has been implicated as one of the commonest causes of infertility in developing countries.[6]

Transvaginal ultrasound scan is a very important and initial imaging technique employed in the evaluation of uterus in women with suspected retained fetal bone.[2] Although in selected cases hysteroscopic can also be used.

Treatment of retained fetal bones fragment depends on so many factors (acute or chronic presentation, symptomatic or asymptomatic, size, location, quantity, extent of scaring and inflammation). It can be medical, or surgical (dilation and curettage or hysteroscopy). Hysteroscopy was utilized in our patient because of the chronicity and multiple number of fetal bones. [2, 3]

Case report.

Patient was a 33-year-old nulliparous lady who presented with a history termination of pregnancy using manual vacuum aspiration in a nursing home at 16 weeks gestation.

She gave a history of having passed a bony spike per vagina two months after the miscarriage and another two years after which she showed the physician who performed the procedure and other physicians but her claims about such bony piece extruded vaginally was dismissed. Patient kept the bony piece which she brought at the time of presentation which was now 6 years after the uterine evacuation and recognizable as a piece of bone. She has since beenunable to conceive within the 6 years period and has an unusual severe dysmenorrhoea. A transvaginal ultrasound scan revealed a normal sized uterus with a normal fundal endometrium, however the lower two-third of the endometrial contained a bright echogenicity consistent with foreign body in the absence of history of an intra-uterine contraceptive device insertion. She had hysteroscopy under paracervical block with removal of numerous fetal bone pieces of over 40 pieces ranging between 2mm to 2cm in length occupying the lower uterine segment initially obstructing visualization of the mid and fundal uterine cavity until completely removed using graspers leaving a clear uterine cavity with visualization of both tubal ostia.

Figure 1 & 2; Pelvic ulstrasound scan showing echogenicity in lower uterine segment with normal upper endometrial cavity and fetal bones passed per vagina seen at presentation respectively.

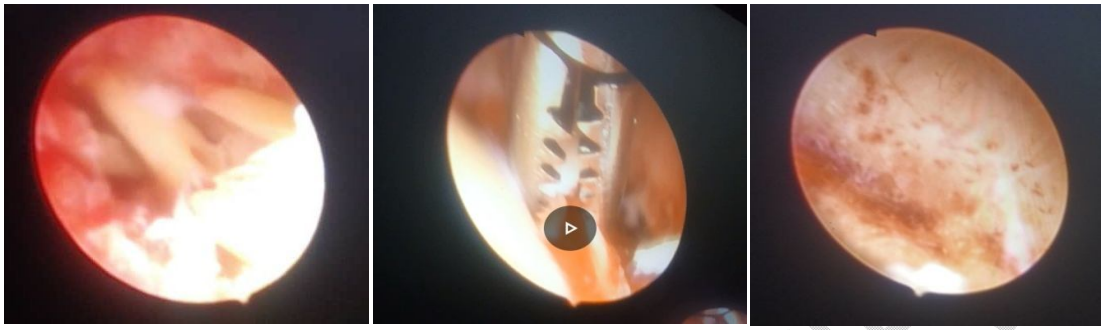

Figure 3,4 & 5; Fetal bones seen at hysteroscopy, hysteroscopic grasper retrieving fetal bone and clear fundal endometrium visualized after complete removal of fetal bones respectively.

Figure 6 & 7; Fetal bones after removal from the uterine cavity on a specimen bottle and instrument tray respectively.

Discussion

This case emphasizes the complications that may arise following second trimester termination of pregnancy. Besides the high risk of bleeding, uterine perforation, and injury to surrounding organs that may occur post second trimester pregnancy termination, it can also lead to retention of fetal bones which could lead to infertility as in the case presented. Infertility may occur by one of or the combination of intrauterine synechia, endometritis, and bilateral tubal blockade from ascending infection. [1,2,6, 7,8.]

It can be asymptomatic, but in majority of cases, the common symptoms include menorrhagia, menometrorrhagia, chronic pelvic pain, severe dysmenorrhoea and secondary infertility. The index case had secondary infertility and severe dysmenorrhoea.

Traditionally, the diagnosis usually is suspected from filling defects on hysterosalpingography,[6] with the definitive diagnosis made by the identification of fetal bones on blind curetting's[3]and treatment byeither curettage or hysterectomy[3]

In contemporary gynaecology and with the advent of transvaginal sonography, office hysteroscopy, or saline infusion Sono hysterography (SIS), the diagnosis and treatment and outcomes seem to have improved significantly. [3]

Diagnostic hysteroscopy followed by an operative procedure using a grasper, forceps or loop resectoscope allows for diagnosis by direct visualization and removal of bony fragments.[3]

Hysteroscopy is very valuable in ensuring complete removal[1,2,3.] It may sometimes require more than one session of hysteroscopy to ensure complete removal [2,3.]

There have been documented cases with difficult removal with hysteroscopy resulting in completion with curettage.[3] This difficulty may be encountered more with the use of grasper and forceps during hysteroscopy.[3] The use of a loop wire resectoscope in an experienced hand allows for ease of removal of partially or completely embedded bone fragments with ease.[3].

Hysteroscopic removal with laparoscopic or ultrasound monitoring especially where intra-myometrial embedment is suspected is a preferred treatment option and allows for early return of fertility[3]

Successful pregnancies haveoccurred after removal of retained fetal bones in the absence of other known causes of their secondary infertility treated. However, this depends on the extent of damage and present or absent of other causes of infertility.[3,]

Conclusion

prolonged intrauterine retention of fetal fragments is now a recognized complication of intrauterine fetal death, missed abortion, spontaneous, incomplete and induced abortions which can result in secondary infertility or chronic pelvic pain.

References

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