

Fetal Bone, an Unexpected IUCD

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Introduction

The oldest modification of an intrauterine contraceptive device (IUCD) used today was suggested by Hippocrates who thought that inserting different object into the uterus could make pregnancy impossible. Additionally, Arab camel drivers placed stones into the uterus of their female camels in order to prevent pregnancy in them. However, the founder of a modern IUCD was German gynecologist grafenberg, who developed the first IUCD in 1920. Unlike the modern IUCDs, he took silkworm and silver wire, which was soiled into a ring, to produce very first IUCD.

Uterine factor is recognized cause of secondary infertility. Presence of foreign body in uterus e.g an IUCD can be a method of contraception. However

unintentionally left behind foreign body can lead to unintentional contraception of infertility. A rare but significant cause of uterine factor infertility could be retained fetal bones from previous mid – trimester dilatation and evacuation (D&E). Other than secondary infertility, it may also cause irregular vaginal bleeding dysmenorrhoea chronic pelvic pain and dyspaerunia. Incidence of retained fetal bone in unknown and a high index of suspicion may help in the identification of such cause. High resolution ultrasound scan may make diagnosis fairly simple. Treatment is removal of retained bones, ideally under hysteroscopic guidance. Resumption of fertility and resolution of other symptoms is quick.

Prolonged intrauterine retention of part of the fetal skeleton is not adequately reported in the literature. Prolonged retention of intrauterine bone is a recognized cause of secondary infertility .Literature regarding endometrial ossification contains more than 80 cases (80% occurring after pregnancy). Common symptoms include menorrhagia, menometrorrhagia, pelvic pain and infertility. Several theories have been proposed to explain osseous tissue within the uterine cavity. The most widely accepted one suggest that ossification represents retained fetal bones following spontaneous, missed, in complete or therapeutic abortion at last after 12 weeks gestation. In contemporary gynecology, translational sonographic diagnosis of retained fetal bones is make and bones removed with the help it resectoscope.

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Case Report

A 36 years old woman (P4A1) mother of three boys and a girl presented with secondary infertility in our OPD (desperately wanting a sister for her daughter –a rare phenomenon itself in a Pakistani culture). She was unable to conceive, for last the four years despite regular unprotected intercourse. She had regular menstrual periods without significant dysmenorrhoea dyspareunia. During her initial assessment and workup, systemic review and past medical history were of little significance. Her last born child was 4 yrs old followed by an 18 weeks fetal demise. Pregnancy was terminated By D&E after failed induction and expulsion at some other center. Post operative course was unremarkable. Subsequent menstrual function was normal. No abnormality was found on general physical examination. Bimanual vagina examination revealed a normal size uterus with closed cervical os and normal adnexae. semen analysis of her husband was normal and so were serum LH, FSH and prolactin, Endovagial scan was performed which revealed a normal size uterus with two fragments of highly acrogenic substances both measuring < 1 cm with acoustic shadow suggestive of foreign body (retained fetal bones). D & C was performed and endovaginal scan done at the end of procedure, in the theatre. Two small bony fragments (later found to be consistent with fetal scalp bones on histopathology) were recovered. Patient conceived three months after the procedure. Pregnancy was uneventful.

Discussion

This is a case of complication of dilatation and evacuation for a miscarriage at 20 weeks. D&E is associated with high risk of excessive hemorrhage and uterine perforation. Furthermore D&E at this gestation is highly likely to be complicated by retained products of conception including fetal bones, unless done in ultrasound guidance. Fetal bones may be retained freely in endometrial cavity or partially or totally embedded in myometrium. The usual symptoms are abnormal bleeding, dysmenorrhoea, dyspareunia at all. Partially embedded or freely retained fragments are more likely to be responsible for infertility as compared to totally embedded fragments.

HSG is unlikely to diagnose retained bones, but hysteroscopy has both diagnostic and therapeutic roles. If hysteroscopy is unavailable, then blind dilatation and evacuation of uterus along with high resolution ultrasound scan .preferably endovaginal scan in theatre can be very helpful. In one series that consisted of 11 woman with secondary infertility after mid trimester abortion, hysterosalpigograms missed the diagnosis in 10 cases while vaginal ultrasonography was able to pick up fetal bones in all the 11 cases. All women conceived and delivered full term infants, except one with bilateral tube occlusion. Eight of these conceptions occurred within three months of removal of bony fragments.

In this days and age, when less costly and highly effective prostaglandins are available for termination of pregnancy, there is little justification for second trimester Dilatation and curettage. Patient should be counseled about probable delay in expulsion of producer of conception with prostaglandins, but also about increased likelihood of complete evacuation by this mode and less chance of infertility issue later on. If D & E is still needed in a few select cases, it should be done under ultrasound guidance using vaginal probe to confirm complete emptying of uterus. Doing a post procedure endovaginal scan at a later date would diagnose retained fetal products, but will require additional anesthesia for removal which can be avoided by using ultrasound at the time of D&E.

Reference

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