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Intrauterine Bony Fragment, A Cause of Secondary Infertility

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Abstract

Retained intrauterine fetal bone is a rare cause of secondary infertility. The most common cause of retained fetal bone is following abortion. It has varied clinical presentations. It may present as secondary infertility, pelvic pain, dysmenorrhoea, abnormal uterine bleeding. This case report describes a 26 year female with previous history of abortion at 12 weeks gestation presenting with complaints of inability to conceive after the previous abortion. The diagnosis of intrauterine fetal bone retention was made and hysteroscopy was done. Following removal of the bone patient conceived. Retained intrauterine fetal bone may act as intrauterine contraceptive device or causes infertility by mimicking Ashermann's syndrome.

Introduction

Infertility is considered when a couple is unable to achieve a clinical pregnancy after 12 months of unprotected sexual intercourse. A couple who has never had a conception is primary infertility whereas a couple who has had a previous conception irrespective of the outcome is secondary infertility [1]. Common causes of female infertility include uterine, tubal factors.

Infertility following abortions in young women is a known entity. It may result from tubal factor due to infection following pregnancy termination or uterine factor following suction and evacuation due to ashermann's. Retained intrauterine fetal bone is another cause of infertility usually following a second trimester abortion or missed abortion. Exact incidence of retained fetal bone is not known [2]. The most common cause of retained fetal bone is following an abortion but endometrial metaplasia, heteroplasia and dystrophic calcification are also known causes [3].

The clinical presentation is variable. The common presenting symptoms are, secondary infertility, pelvic pain, dysmenorrhea, abnormal uterine bleeding [4].

The diagnosis is made on a strong index of suspicion in women with history of a previous abortion. Transvaginal sonography

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and Pelvic X-ray may aid the diagnosis. Hysteroscopy is a useful method of diagnosis. Generally the products are adherent to the uterine wall and are removed with difficulty by dilation and curettage [4].

In this case report, we present a patient with retained intrauterine fetal products who presented with complaints of secondary infertility.

Case report

A 26 year old P_0A_1 came to outpatient department with complaints of inability to conceive for 1 year despite regular unprotected intercourse. Her previous menstrual cycles were regular with a normal flow. She had one conception 4 months following marriage which resulted in a missed abortion at 12 weeks period of gestation, for which suction and evacuation was done one and a half year back. Her general physical examination was normal. Per vaginal examination revealed a bulky uterus and bilateral fornices were free. All routine blood investigation were within normal limit. A transvaginal sonography revealed a bright intrauterine echo of 3 x 1 cm lying just beside the endometrium cavity which was suspected to be a retained fetal bone (Figure 1).

After a preanesthetic checkup she was posted for hysteroscopy. Intraoperatively, a fetal bone was seen on the post uterine wall just above the internal os. A 3 x 1 cm fetal bone was removed by dilatation and curettage (Figure 2). Patient withstood the procedure well. Histopathology confirmed the diagnosis of retained products of conception. A 6 week follow up scan was found to be normal.

On follow up, she conceived after 6 months and currently is on regular follow up with an ongoing pregnancy of 18 weeks.

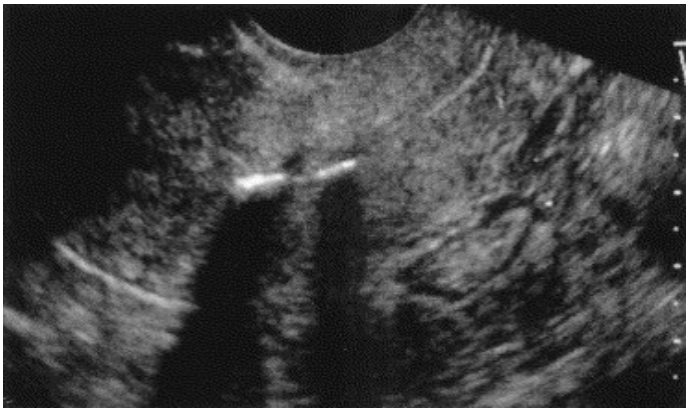

Figure 1: Intra uterine bony spikule

Figure 2: 3x 1 cm bone removed from endometrial cavity by dilatation and currettage

Discussion

Apart from the life threatening complications like excessive bleeding and uterine perforation, second trimester dilation and curettage can rarely be associated with retained intrauterine fetal bone. This rare complication has been described in this case report leading to secondary infertility.

The most common cause of intrauterine bony fragment is following abortion. Some bony fragment like the extremity parts may easily be detached following instrumentation in second trimester abortions, and may be retained in the uterus. Other probable etiology for bony fragment in endometrial cavity include metaplasia of mature stromal cells of the endometrium or heteroplasia of embryonally displaced mesodermal cells [3].

Fetal bones can either be freely retained or may be embedded inside the myometrium [5]. Presenting symptoms may be abnormal uterine bleeding, dysmenorrhoea, dyspareunia, chronic pelvic pain [6]. It may remain completely asymptomatic and, as in our case, may be diagnosed on a routine ultrasonography done in case of secondary infertility. The risk of infertility following intrauterine bony fragment depends upon whether the bone is partially or completely embedded in the myometrium or is lying freely in the endometrial cavity. The fertility may not be compromised if the bony fragment is completely embedded in the uterine cavity. A free or patially embedded bony fragment may act as a intrauterine contraceptive device or uterine synechia causing infertility. Presence of bone in the fundal region can also hinder implantation by increasing endometrial prostaglandins [7].

Apart from a high index of suspicion, history, clinical examination and pelvis ultrasound scan may help in reaching the diagnosis. The use of hysterosalpingography in diagnosis of retained fetal bones is limited [8]. Hyseterocopy is probably the most accurate modality, which may be both diagnostic and therapeutic. It has the advantage of removing the fetal bone under direct vision . Additionally dilation and curettage under ultrasonographic guidance is also acceptable [2]. Return of fertility is high if there are no associated complications like tubal blockage. As in our case patient conceived following removal of the bone fragment.

Conclusion

Medical management of mid trimester abortions should be advocated, avoiding procedures like dilation and curettage. Mid trimester dilation and curettage under ultrasonographic guidance is recommended so that completeness of the procedure is confirmed. A high index of suspicion should be there in women presenting with infertility, with a previous history of mid trimester abortion. Wherever, facilities are available, routine hysteroscopy should be done in such cases. A completely embedded bony fragment may remain asymptomatic and hence may not require removal.

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