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Retained Fetal Bones as a Cause of Secondary Infertility: A Case Series

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Abstract

The most common factors of infertility in developing countries like ours are uterine and fallopian tube factors. There is not enough literature on prolonged intrauterine retention of parts of the fetal skeleton even though it is a well-recognized cause of secondary infertility. Here, we present three cases of intrauterine retention of fetal bones who presented with secondary infertility with menstrual problems. All of them were relieved of their symptoms after hysteroscopic removal of bony fragments. We would like to emphasize the importance of taking a thorough history and clinical examination and evaluation with transvaginal ultrasound as well as diagnostic and therapeutic hysteroscopy to establish the diagnosis and the removal of retained fetal bony fragments, besides other relevant investigations in patients with secondary infertility. Our study highlights, fetal bones in the uterine cavity may prevent conception similar to intrauterine contraceptive devices therefore we expect restoration of fertility after removal of retained fetal bony fragments. For precise diagnosis and efficient management of such patients, gynecologists need to be highly suspicious of this condition.

Keywords

Secondary infertility, retained fetal bones, hysteroscopy.

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I. Introduction

Secondary infertility is becoming increasingly common nowadays. The etiology is widely varied but a major contributing cause is previous abortions especially illegal abortions. Abortions frequently lead to subsequent fertility problems, most commonly due to damaged fallopian tubes from infections or sometimes even due to damage to the endometrium [1]. A rare but significant cause of uterine factor infertility is retained fetal bones from previous mid-trimester Dilatation and Evacuation (D&E) especially when performed by untrained personnel.
An uncommon and interesting cause of secondary infertility is retained fetal bones from the previous mid-trimester D&E. These retained fetal bones not only cause secondary infertility but also may present as menstrual irregularities [2].
Here we present a case series of 3 patients who presented to us with varied symptoms and were diagnosed with retained fetal bones and treated accordingly.

CASE1

We came across a very interesting case of a 31 years old P1L1A1 who underwent Lower Segment Caesarean Section (LSCS) 11 years back, followed by D&E at 12 weeks pregnancy 9 years back. She came to us with complaints of secondary infertility. She had no menstrual complaints and her husband's semen analysis was within normal limits. Her transvaginal ultrasonography showed a normal sized anteverted uterus with an echogenic scarred endometrium. Her hysterosalpingogram showed filling defects. She took some treatment for infertility from somewhere else but without any success. We performed a diagnostic and therapeutic hysteroscopy during which we removed multiple irregular bone fragments [FIGURE1]. A repeat ultrasound 2 months later revealed a normal empty uterine cavity with a normal endometrial lining. Within the next 6 months, the patient conceived spontaneously and had a healthy live baby born through LSCS 9 months later.

CASE2

We had a case of a 28 years old P1L1A1 lady who was not able to conceive after 2 years of regular unprotected intercourse. She had a healthy 3-year-old male child and a history of an abortion 2 years ago. Her ultrasonography was normal. On hysteroscopy, multiple bone pieces were seen and removed. Histopathology confirmed these bone fragments [FIGURE2]. She had a successful conception 6 months later [FIGURE3].

CASE3

Another head-scratcher was the case of a 27-year-old P1L1A2 lady. She had delivered vaginally 6 years ago and had a healthy baby girl. She had a history of 2 abortions, 5 and 3 years back, both being mid-trimester surgical terminations for various reasons. Her fertility workup and her husband's semen analysis were within normal limits.A diagnostic and operative hysteroscopy revealed multiple pieces of fetal bones, [FIGURE 4] which were removed. Postoperative ultrasonography and hysterosalpingography were normal which were performed 1 week later. The patient was advised to try to conceive from her next cycle, in which she succeeded later.

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II. Discussion

Prolonged intrauterine retention of fetal bones is a rare cause of secondary infertility other than more common causes that are related to uterine and fallopian tube factors. There is inadequate literature available with regards to prolonged intrauterine fetal bone retention even though it is a well-recognized cause of secondary infertility. This retention causes dysmenorrhea, abnormal uterine bleeding, chronic pelvic pain, and secondary infertility [2].

As suggested by the worldwide records, about 26 million legal and 20 million illegal abortions occurred in 1995[3]. 97% of the unsafe abortions are conducted in developing countries and almost 55% take place in South Asia [4]. Retained bone fragments or intrauterine ossification is becoming increasingly common nowadays mostly because of increasing cases of illegal abortion.

Dawood and Jarrett proposed that these may function as intrauterine synechia or device which increases endometrial prostaglandin production and prevent implantation [5]. Also, the reactive endometritis caused, interferes with blastocyst implantation. It is usually preceded by a history of abortion, either spontaneous or induced.

III. Conclusion

To conclude, healthcare professionals should be very vigilant while evaluating patients with previous abortions, who present with menstrual complaints or secondary infertility. These retained bones act as intrauterine contraceptive devices and prevent conception. These may also lead to synechia formation. USG may reveal echogenic shadows in such cases but the gold standard for the diagnosis of these patients is hysteroscopy which also serves as a therapeutic tool.

We would like to emphasize the importance of taking a thorough history and clinical examination. Besides other relevant investigations, it is important to obtain transvaginal ultrasound as well as diagnostic and therapeutic hysteroscopy in patients with secondary infertility, to detect foreign body in the uterine cavity that may cause secondary infertility. Hence, a high index of suspicion is needed for precise diagnosis and efficient management of such cases.

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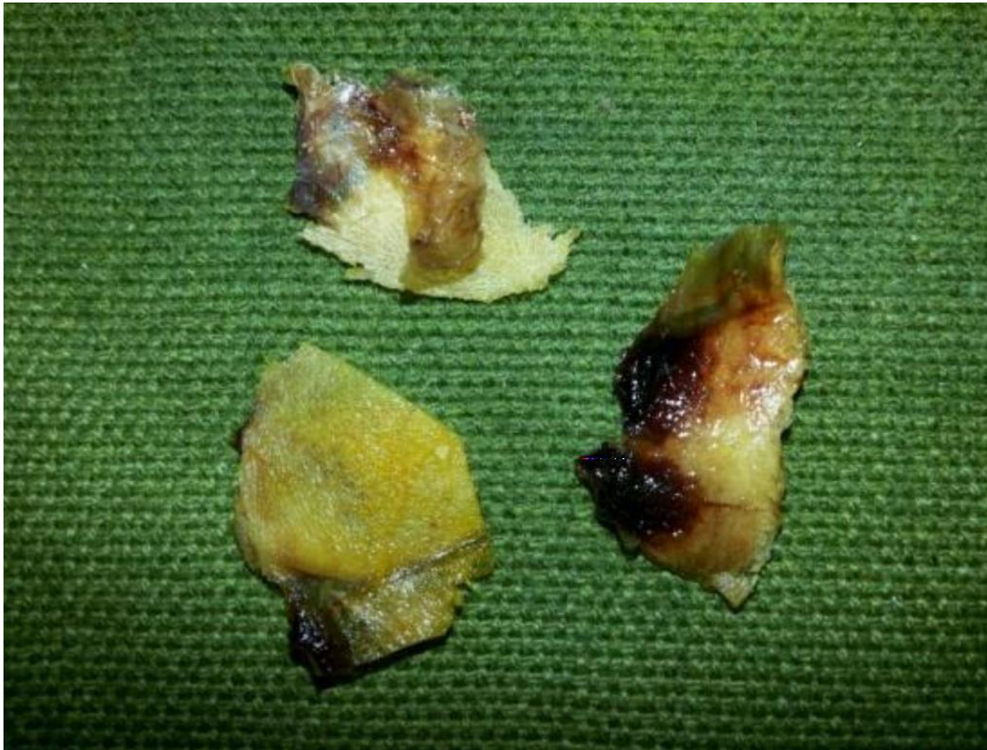

Figure 1

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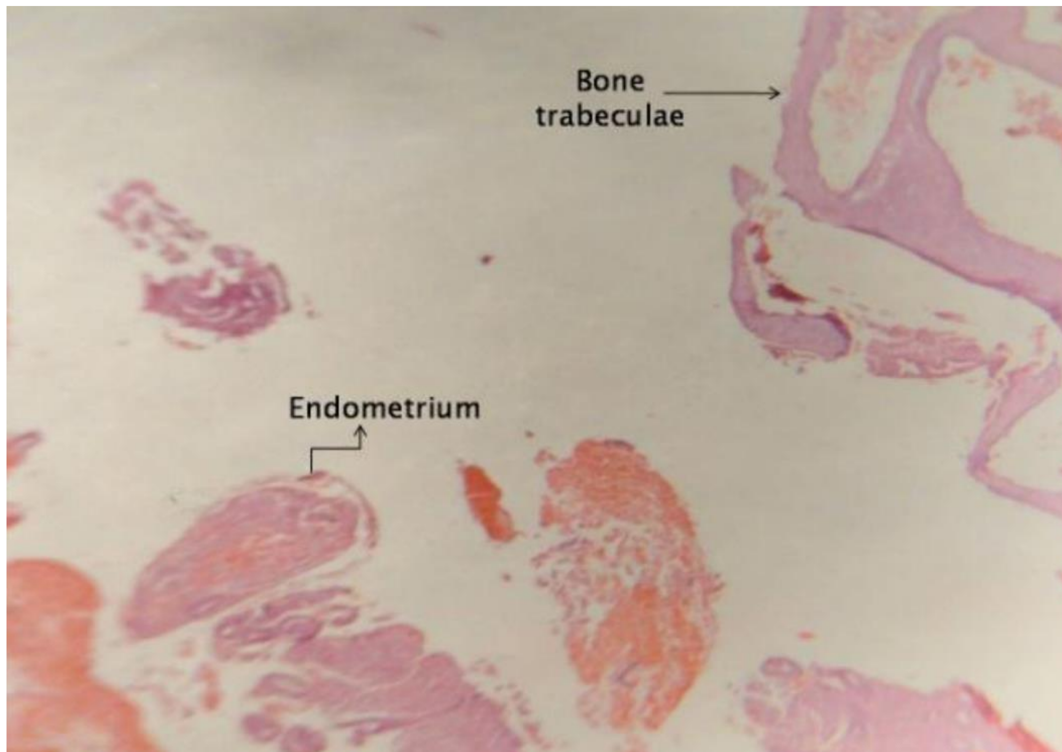

Figure 2

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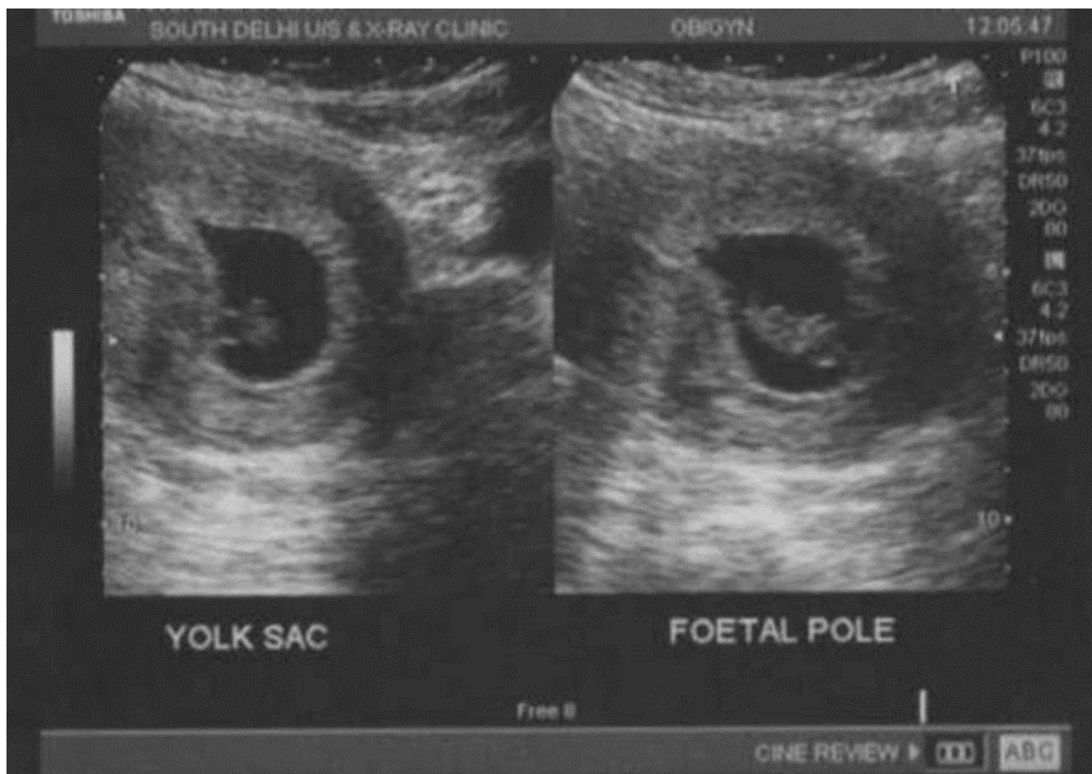

Figure 3

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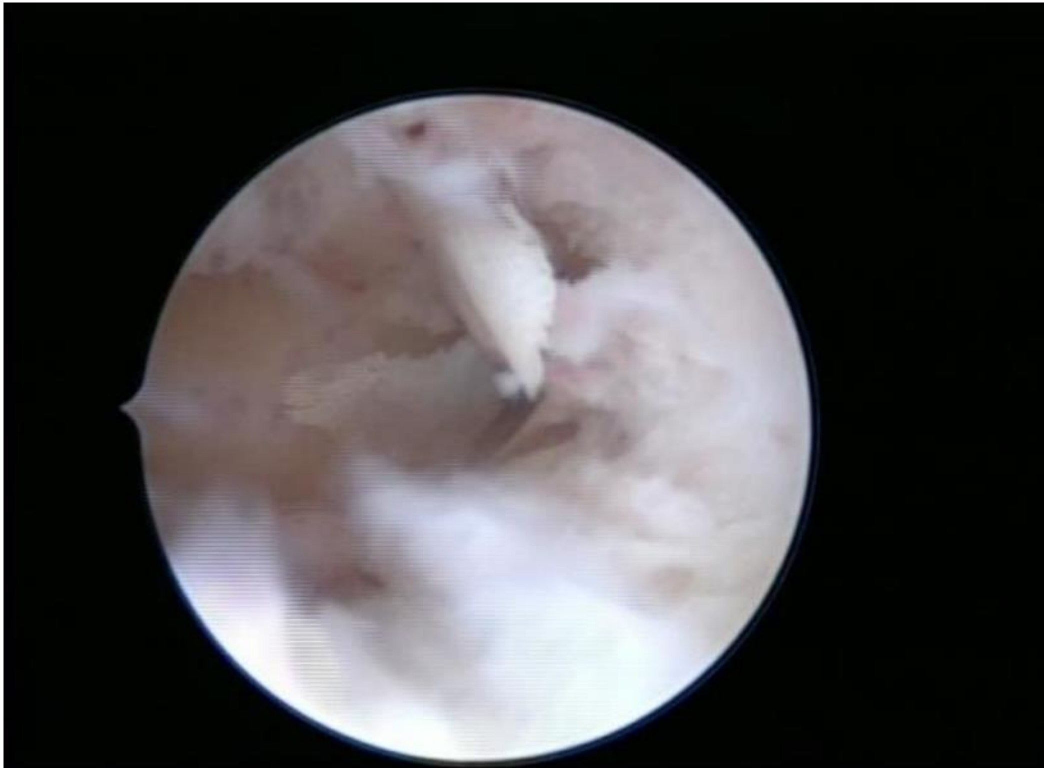

Figure 4

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