We present an unusual case of a 28-year-old woman who had termination of pregnancy at 18 weeks of gestation. She visited our clinic with a history of secondary infertility for 3 years. A transvaginal ultrasonography revealed a hyperechogenic image that suggested presence of an intrauterine contraceptive device (IUCD). Hysteroscopy revealed a foreign body in the uterine cavity. The foreign body was removed with a hysteroscope using additional instruments that were not designed for hysteroscopy. Histological examination of the foreign body revealed fragments of dead bone.

Key words: Fetal bone, intrauterine, hysteroscopy

INTRODUCTION

Intrauterine retention of fetal bones is a rare condition. The most common cause, among the reported cases, is a previous second trimester abortion. In addition to a detailed anamnesis, pelvic transvaginal ultrasonography is also important for an accurate diagnosis. Most patients complain of dysmenorrhea, dysfunctional uterine bleeding, pelvic pain, dyspareunia, vaginal discharge, or spontaneous passage of fetal bones. In this report, we describe a atypical technique used in a rare case of secondary infertility due to prolonged retention of intrauterine bone after curettage.

CASE REPORT

A 28-year-old woman was referred to the outpatient diagnostic center of our gynecology clinic with infertility and mild-to-moderate pelvic pain. Three years previously, the patient had spontaneous termination of pregnancy at 18 weeks of gestation. Curettage had been performed at another clinic. Since that time, the patient suffered from constant pelvic discomfort. During this period, she did not become pregnant. Clinical examination showed soft abdominal walls and no tenderness with palpation of the lower abdomen. A bimanual abdominopelvic examination showed that the size and position of the uterus were normal and that both ovaries were nonpalpable. The patient stated that after the curettage, she had experienced vaginal discharge and discomfort during sexual intercourse. The patient also stated that she had not taken oral contraceptives since the curettage.

An abdominal ultrasonography revealed a hyperechogenic image that suggested an IUCD in the longitudinal and transverse planes (Figure 1). A hysteroscopy was performed in an outpatient setting by means of a vaginoscopic approach without using a speculum or a tenaculum. An operative hysteroscope with a 30° telescope and a 5.5-mm external sheath was employed (Olympus GmbH & Co., Hamburg, Germany). Normal saline solution was used as the distention medium. Throughout the procedure, the intrauterine pressure was maintained at 80–100 mm Hg.

The procedure was performed under sedation with propofol. The external and internal orifices were easily passed, and a disc-shaped bony structure was observed lying in a horizontal plane inside the cavity; this structure separated the uterine cavity into 2 parts. The bony structure was fixed in the lateral part of the cavity and was embedded in the uterine wall. Due to the weakness of French instruments introduced through the hysteroscope operating channel, it was not possible to dislodge the bony structure. We decided to introduce alligator forceps inside the uterine cavity, in a parallel manner to the hysteroscope shaft, without using a tenaculum. The alligator forceps were advanced slightly further than the hysteroscope shaft (Figure 2). With this technique, the ossified material was broken, and the biggest pieces were removed with the alligator forceps. The remaining smaller pieces were removed with the 5 French biopsy forceps, which had been introduced through the operat-
ing channel, pulling out the hysteroscope for each piece removed. The fragments appeared to be from the skull (Figure 3). A histopathological analysis confirmed that the structures contained bone fragments (Figure 4). Three months after the procedure, the patient was examined at our clinic and was found to be free of pain or vaginal discharge. A repeated hysteroscopy showed a normal uterine cavity. The patient is pregnant one year from removal of body structures from intrauterine cavity.

**DISCUSSION**

Every year, many abortions are performed. Although abortion is an extremely safe procedure, complications do occur. Several studies have reported the prolonged retention of fetal bones, up to 23 years following an abortion, either spontaneous or induced. The major complaints in these reported cases have been secondary infertility, irregular vaginal bleeding, cervicitis, vaginitis, and spontaneous passage of fetal bones. The retained fetal bones are responsible for the irregularity of the uterine cavity. The reported incidence of retained fetal bones is 0.15% in women undergoing diagnostic hysteroscopy. Transvaginal sonography should be the first imaging modality used to evaluate patients presenting with infertility and irregular bleeding after abortion, in order to exclude the possibility of retained products of conception. Sonographic visualization of a hyperechogenic focus within the endometrial cavity should alert the physician to the possibility of a foreign body. If transvaginal sonography indicates that such materials are present, hysteroscopy should be performed to remove those. In many cases, the image is misinterpreted as an IUCD, so a detailed anamnesis is important for an accurate diagnosis.

Currently, for patients with secondary infertility and a history of pregnancy termination, hysteroscopy is a significant valuable method for differential diagnosis as well as removal of bony fragments. Pace et al. stated that hysteroscopic resection should be an elective treatment for endometrial ossification, as this procedure enables the removal of all osseous fragments. The traditional method for removal of fetal bony fragments is dilatation and curettage, which is frequently performed under ultrasound guidance. Although hysteroscopy is the preferred procedure for removal of intrauterine foreign bodies, the bone tissue may occasionally be deeply embedded in the uterine wall and can therefore be difficult to completely remove with the hysteroscope.

There is little information in the literature regarding hysteroscopic techniques used for removal of remnant bone. We believe that removal of remnant bone is difficult in some cases because of its consistency and fixations in the uterine wall. Thus, the remnant bone may cause damage to the uterus during manipulation. Hysteroscopy is an advantageous procedure compared to curettage under ultrasound guidance; however, no specific hysteroscopic instruments are used consistently for removal of foreign bodies. Most of the instruments used in hysteroscopic practice are fragile.

![ULTRASONOGRAPHIC IMAGE OF INTRAUTERINE FETAL BONE](image1)

**FIG. 1**

**HYSTEROSCOPIC PHOTO OF ALLIGATOR FORCEPS GRASPING FETAL BONE**

![Hysteroscopic photo of alligator forceps grasping fetal bone](image2)

Many cases involving fetal bones have been resolved using 5 or 7 French instruments introduced through the operating channel of the hysteroscope or using the fine loop of the resectoscope, and have usually been performed in an operating theatre. In the present case, we used a atypical technique for hysteroscopic removal of retained fetal bones from the uterine cavity, 3 years after a second trimester abortion. Upon performing a PubMed search for literature published during the last 20 years, we did not find any similar techniques. Based on our experience, we stress that using alligator forceps in a parallel manner to the hysteroscopic shaft is a safe technique and provides good results in removing foreign bodies in some cases. Our technique differs from other reported techniques in the following aspects: performance of this intervention in an ambulatory setting, the use of a hysteroscope with a smaller diameter, and the use of instruments not designed for hysteroscopy.
CONCLUSION

Intrauterine retention of fetal bone is a rare complication of abortion and can cause secondary infertility. This condition should be considered particularly when a woman with a history of late termination presents with pelvic pain. In some cases, the removal of remnant bone may be performed in an outpatient setting during diagnostic hysteroscopy, using additional instruments not designed for hysteroscopy.

SUMMARY

Intrauterine retention of fetal bone is a rare complication of abortion and can cause secondary infertility. This condition should be considered particularly when a woman with a history of late termination presents with pelvic pain. In some cases, the removal of remnant bone may be performed in an outpatient setting during diagnostic hysteroscopy, using additional instruments not designed for hysteroscopy.

REFERENCES