

## FETAL ENDOSCOPIC TRACHEAL OCCLUSION

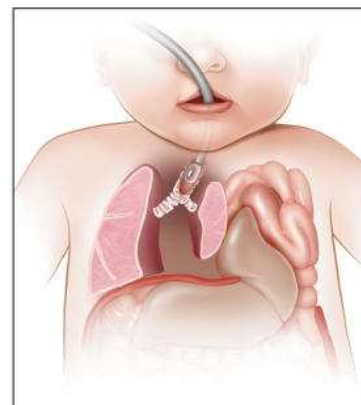
# KNOWING WHAT TO LOOK FOR MAY NOT BE EASY. KNOWING WHERE TO LOOK FOR HELP IS.

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*FETO is a minimally invasive procedure in which a tiny balloon is inserted into the fetus to plug the trachea. The balloon is inflated, left in place for several weeks to allow the fetus' lungs to grow, then removed a few weeks prior to delivery.*



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## Sonographic Findings of Endometrial Osseous Metaplasia, a Cause of Dysfunctional Vaginal Bleeding and Secondary Infertility

A 47-year-old G8 P2 healthy female presented for evaluation of intermenstrual and postcoital bleeding, pelvic pain, and secondary infertility. The patient intended to undergo in vitro fertilization. Her obstetric history included two term pregnancies, four spontaneous abortions in the late first trimester, one ectopic pregnancy with left salpingectomy, and one early second-trimester pregnancy termination for trisomy 21.

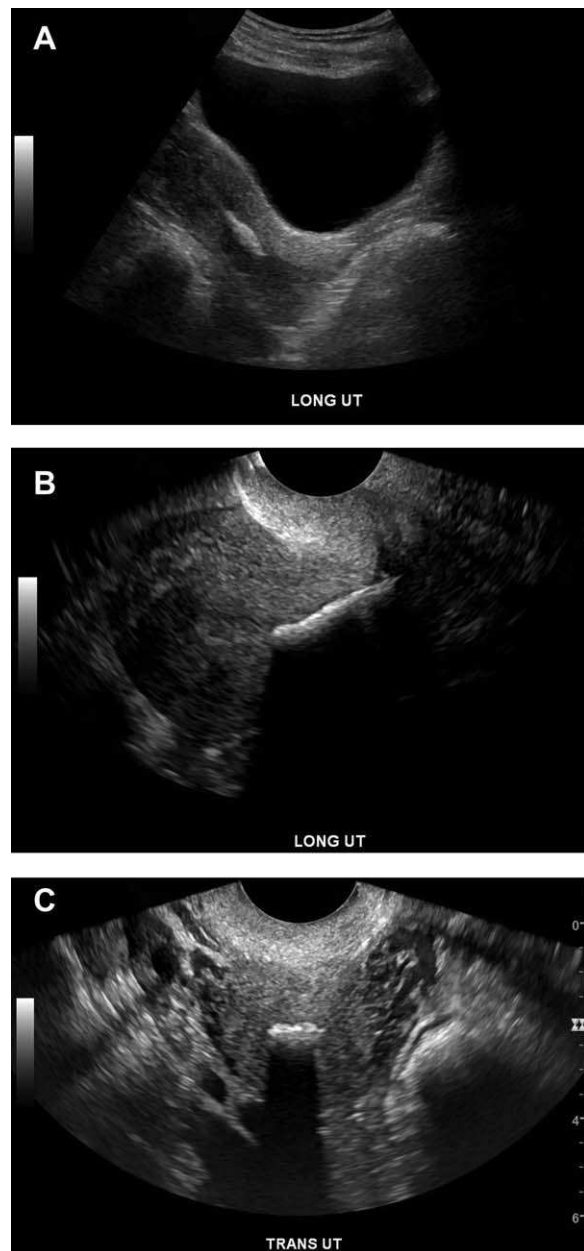
Pelvic ultrasound evaluation revealed an intrauterine linear hyperechoic structure with posterior acoustic shadowing, suggestive of a foreign body (Figure 1). The patient had a remote history of intrauterine contraceptive device, which had been removed, and no known current indwelling device. A foreign object retrieval, using ultrasound guidance, was attempted by the gynecologist but was unsuccessful. Hysteroscopy was subsequently performed, which demonstrated dense white glistening tissue embedded in the endometrium. This material was fragmented and removed, then submitted for pathologic evaluation that revealed endometrial osseous metaplasia (Figure 2).

We report the sonographic features of this rare entity, which may be responsible for secondary infertility in women who have a history of prior abortions and/or uterine instrumentation.<sup>1</sup> This typically presents as central hyperechoic material within the uterine cavity that may mimic a retained foreign body, most commonly an intrauterine contraceptive device.<sup>2</sup> Endometrial osseous metaplasia is a rare cause of secondary infertility, the etiology of which remains controversial. Because most cases occur in women who had previously been pregnant, Newton et al first suggested retention of fetal products as the cause.<sup>3</sup> In particular, it was theorized that this entity occurred following late first-trimester or second-trimester abortions, when fetal osseous structures had started to develop. Because this condition was also seen in women who had early first-trimester abortions, before the development of fetal osseous structures, the theory of chronic endometritis predisposing to endometrial metaplasia was proposed in those who had undergone repeated uterine instrumentation.<sup>1</sup> A few cases have been reported in nulliparous women, suggesting that a rare minority may arise de novo.<sup>2</sup>

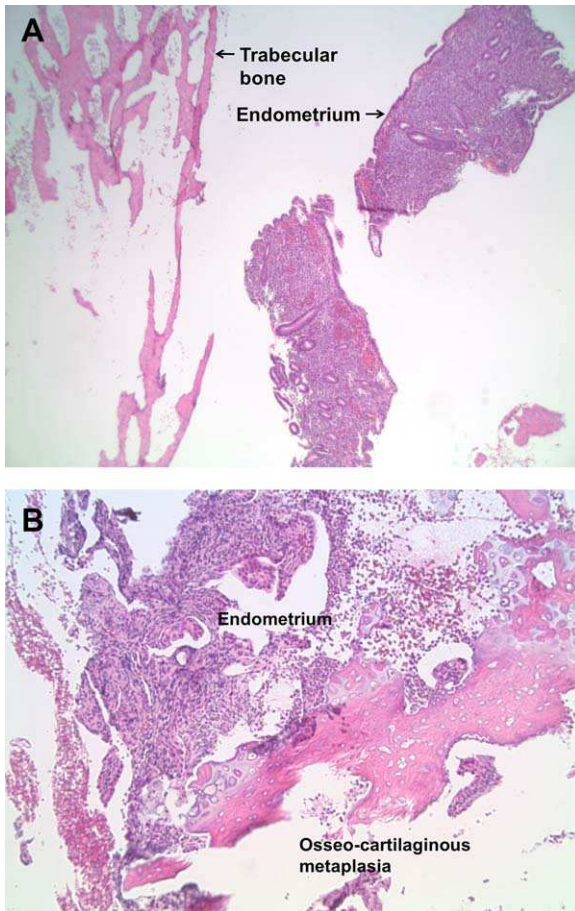
Endometrial osseous metaplasia remains a rare but important consideration in women who are experiencing

infertility and multiple pregnancy losses.<sup>1</sup> Management of this entity requires hysteroscopic resection of the metaplastic bone, which leads to excellent results and restoration of fertility in many of these women.<sup>1,4</sup> The

**Figure 1.** Ultrasound images of the uterus demonstrate a hyperechoic linear structure (arrow) centrally positioned at the inferior aspect of the uterine cavity with posterior acoustic shadowing, suspicious for foreign body. Images include transabdominal longitudinal (A), transvaginal longitudinal (B), and transvaginal transverse (C) views.



**Figure 2.** Pathologic evaluation of hysteroscopically resected specimen. Low (**A**) and high (**B**) resolution images demonstrate co-existing endometrial tissue with trabecular bone and foci of osseocartilaginous metaplasia.



role of ultrasound in diagnosis is pivotal. Some authors have suggested use of sonographic guidance during hysteroscopic removal to enable resection and assess adequacy of removal of ossified tissue.<sup>5</sup> It is important that sonologists are familiar with this entity, as the ultrasound appearance is quite characteristic, even pathognomonic, and can facilitate a quick accurate specific diagnosis.

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