Intramural pregnancy (IP) is a rare type of ectopic pregnancies, its incidence is less than 1%. The risk of uterine rupture markedly increases with the gestational age, which would threaten the patient’s life. However, there are only a few reported cases till now. Herein, we report a rare case of twin IPs with successful management.

A 50-year-old woman (gravida 2, para 0, spontaneous miscarriage 1), who had several uterine leiomyomas but with no gestational trophoblastic disease or other gynecological diseases, and the hysterosalpingography showed bilateral tubal block. She had received 2 frozen day-3 embryo transfer with donated oocytes in February 2019.

The serum β-hCG level were 732 IU/L and 8634 IU/L at day-14 and 28 after ET, respectively. This patient complained of slight abdominal pain and vaginal bleeding and she came for the first routine transvaginal sonography (TVS) scan at day 28 after ET, which was performed by an experienced sonographer. 2D ultrasound (GE voluson E8) revealed a mass measuring 22*13mm in the left cornu of the uterus, with two gestational sacs, and both with a yolk sac only. Color doppler showed abundant blood flow around the mass. 3D ultrasound was then performed. which showed that the mass was completely surrounded by the uterine musculature and separated from the uterine cavity. Thus, the mass was suspected to be IP.

A laparoscopy was performed immediately. A slightly bulging mass was found on the left anterior lateral aspect of the uterus and completely surrounded by myometrium. The amniotic fluid and gestational sac were visible and the mass was resected by electrofulguration. Villous tissue was then confirmed by pathological examination and thus the diagnosis of IP was made. The patient had an uneventful postoperative course after surgery. TVS is an useful tool for the early diagnosis of IP. Early diagnosis makes early management possible and then prevents serious complications and preserves the fertility.