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Ectopic cesarean scar pregnancy with early placenta increta and bladder involvement: the role of ultrasound and MRI in diagnosis and surgical planning

Xiomara Córdoba Valverde, Hillary V. Jiménez Araya, Jose P. González Cerdas

Introduction

A 28-year-old woman with history of three previous cesarean sections presented with a one-week history of intense pelvic pain, exacerbated by physical activity, and 3 months of amenorrhea with a positive urine pregnancy test. Pregnancy was confirmed by blood test (initial serum B-hCG level in 212000 mIU/mL), markedly elevated, suggestive of high trophoblastic activity.

Ultrasound and MRI Findings

Transvaginal ultrasound was performed and demonstrated uterus measuring 123 x 64 x 79mm with a gestational sac implanted at the level of the previous c-section scar, located in mid lower uterine segment. The gestational sac was irregular in appearance and hypotonic in appearance. It had an embryo (CRL 7.8mm) with absent embryonic cardiac activity. The placenta appeared with intense vascularity seen on Doppler, including bridging vessels and lacunae. The myometrium was markedly thinned. Suspicion of bladder involvement was raised by findings in ultrasound. Given the findings of early placenta accreta spectrum, an MRI was performed and confirmed a cesarean scar pregnancy with a placenta approximately 12 mm from the internal cervical os, heterogeneous, with hypointense intraplacental bands and disorganized vascularization. There was myometrial involvement due to the loss of the uterine-placental interface, resulting in an extrinsic bulge that projects into the vesicouterine space, contacting and infiltrating the bladder wall. This is evidenced by the loss of the bladder wall's normal hypointensity over an approximate 2 cm segment. It was classified as an ectopic pregnancy in a cesarean scar with a placenta percreta, grade IIIC by images.

Surgical Intervention

The patient underwent multidisciplinary management with planned surgical intervention in conjunction with urology. The procedures included bilateral ureteral stent placement with left retrograde pyelogram, exploratory laparotomy with subtotal hysterectomy with ovaries preservation and bladder repair. Intraoperative findings confirmed placental invasion and bladder involvement. Uterine manipulation revealed a perforation of the isthmus, allowing visualization of a gestational sac approximately 4 cm in diameter. There was a lesion at the level of the bladder dome approximately 4 cm in diameter. Postoperative management included a fixed high-caliber Foley catheter for 10 days and with antibiotic prophylaxis with nitrofurantoin, with an adequate clinical evolution. Histopathological findings demonstrated early pregnancy implanted in a cesarean scar associated with placenta accreta, with chorionic villi infiltrating the myometrium without full-thickness penetration.

Conclusion

An ectopic c-section pregnancy complicated with early placenta accreta spectrum is rare but a high-risk condition, resulting in poor obstetric outcome, with high morbidity. This case highlights the importance of an early detailed ultrasound evaluation and complementary MRI in identifying invasion and correlate the imaging findings with an adequate surgical planning, reducing morbidity and mortality.

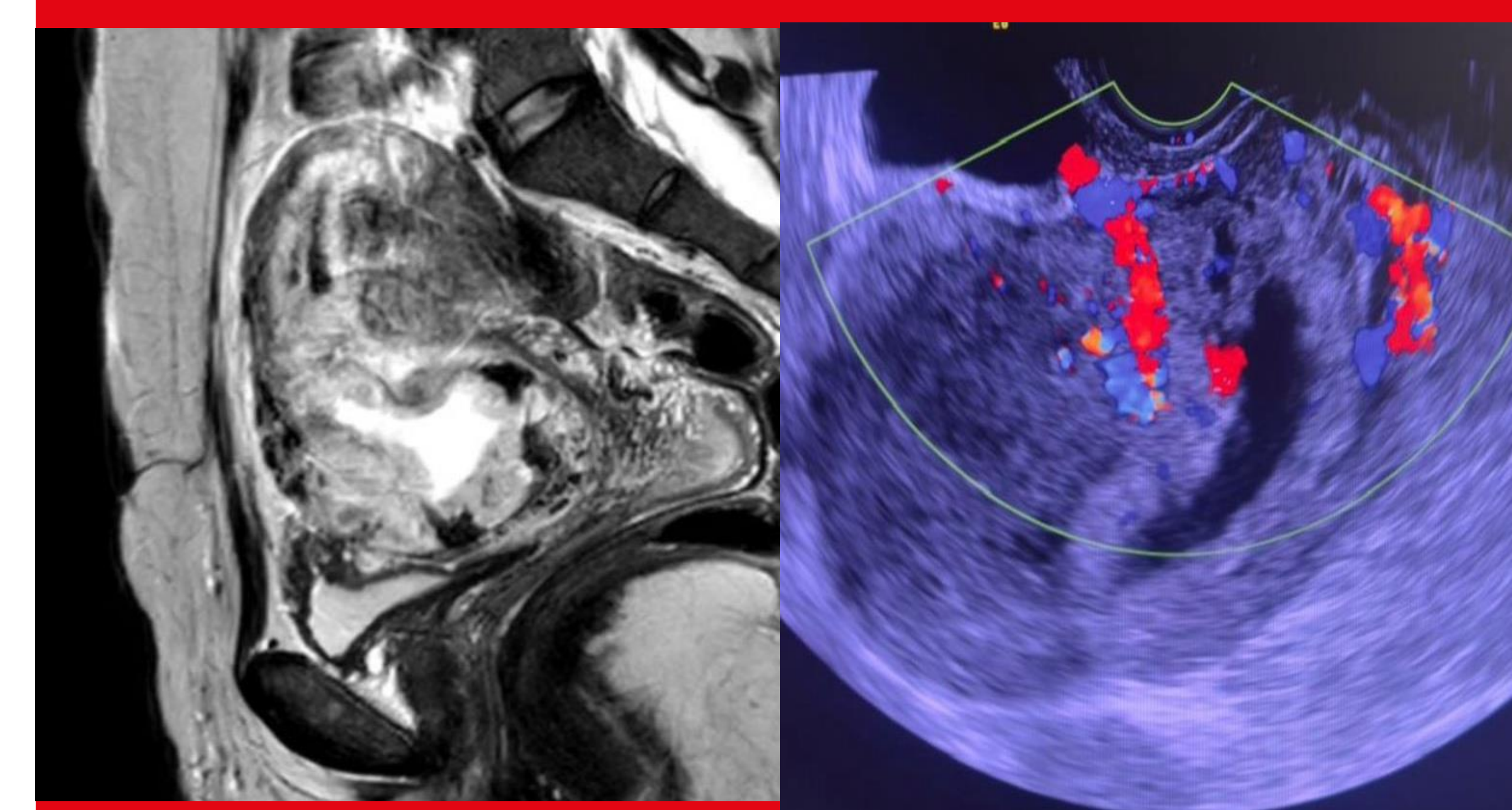


Figure 1. MRI and Colour Doppler image demonstrating prominent bridging vessels transversing the uterovesical interface in the cesarean scar.

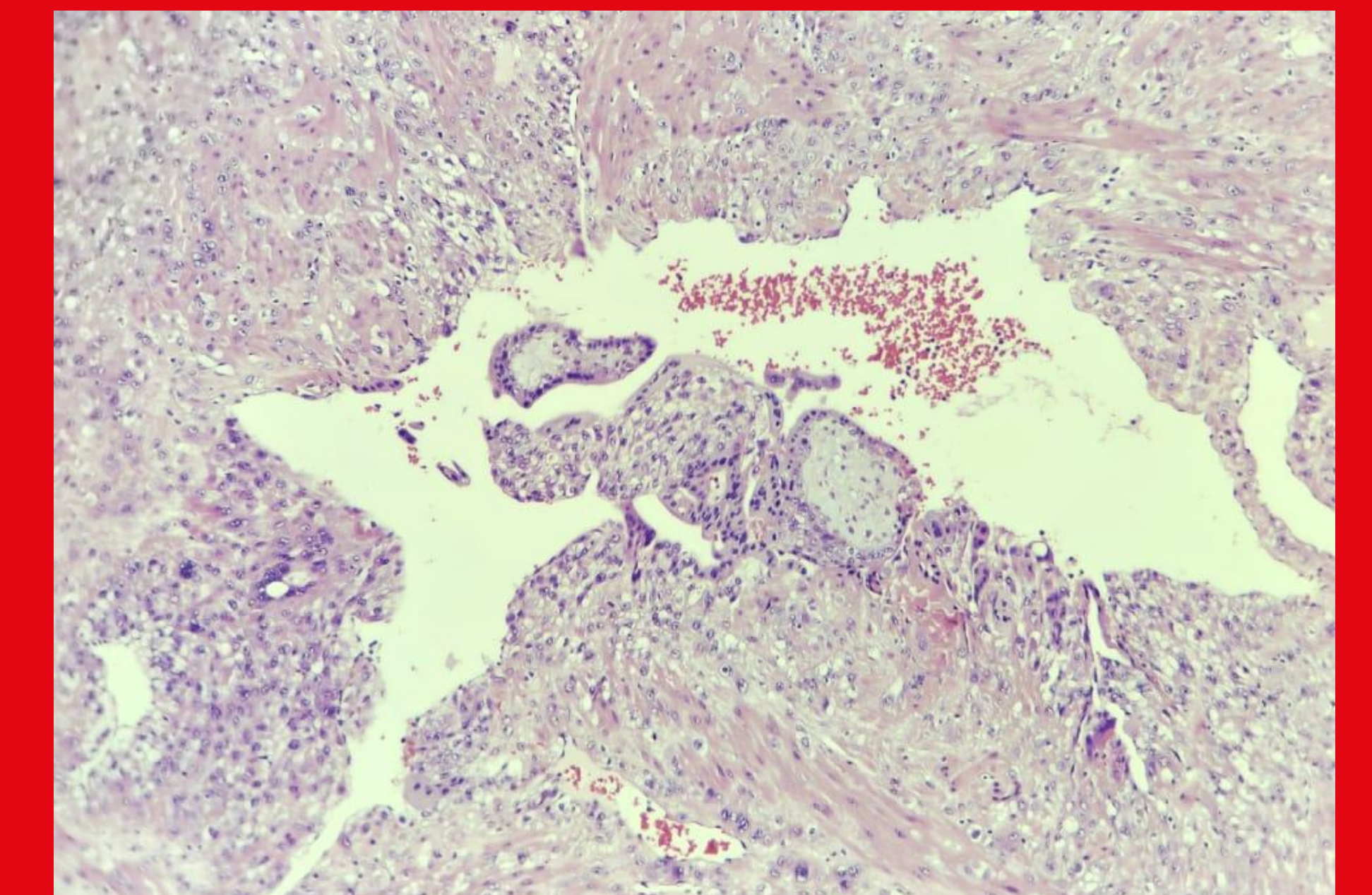


Figure 2. Chorionic villi infiltrating the myometrium, with involvement of blood vessels.



Figure 3. Surgical specimen of the uterus