

A near miss: Diagnosis of an interstitial ectopic pregnancy using 3D ultrasound

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Introduction

Interstitial ectopic pregnancy is a rare subset of tubal ectopic pregnancy where the pregnancy implants in the most proximal part of the fallopian tube, accounting for 1-6.3% of all ectopic pregnancies (RCOG, 2016).

These can be further divided into complete interstitial ectopic pregnancy and partial interstitial ectopic pregnancy (Nguyen, 2022).

This case demonstrates a “near-miss” and the importance of considering interstitial ectopic pregnancy as a differential diagnosis in the presence of a laterally sited gestational sac. It also highlights the role of β HCG follow up and 3D ultrasound in complex or equivocal presentations.



Case report

A 32 year old P1 with a history of previous right sided tubal ectopic pregnancy managed by laparoscopic salpingectomy was diagnosed with early fetal demise at eight weeks gestation, and underwent medical and, subsequently, surgical management of miscarriage (SMM).

She contacted the Early Pregnancy Assessment Unit (EPAU) three weeks after the SMM to report vaginal bleeding and a positive urine pregnancy test. The patient was reviewed the following day where β HCG and 2D/3D scans were performed.

These scans identified a left sided interstitial ectopic pregnancy (images 1 and 2) which had been misdiagnosed on initial presentations as a correctly sited pregnancy.

βHCG was 2193 U/L, then 2060 U/L on repeat 48 hours later.

The patient was advised of management options and treated successfully with a single dose of methotrexate with β HCG tracking until levels <20 U/L.

Interestingly, histopathological analysis of the tissue removed at time of surgical management confirmed the presence of products of conception, suggesting a partial interstitial ectopic pregnancy.

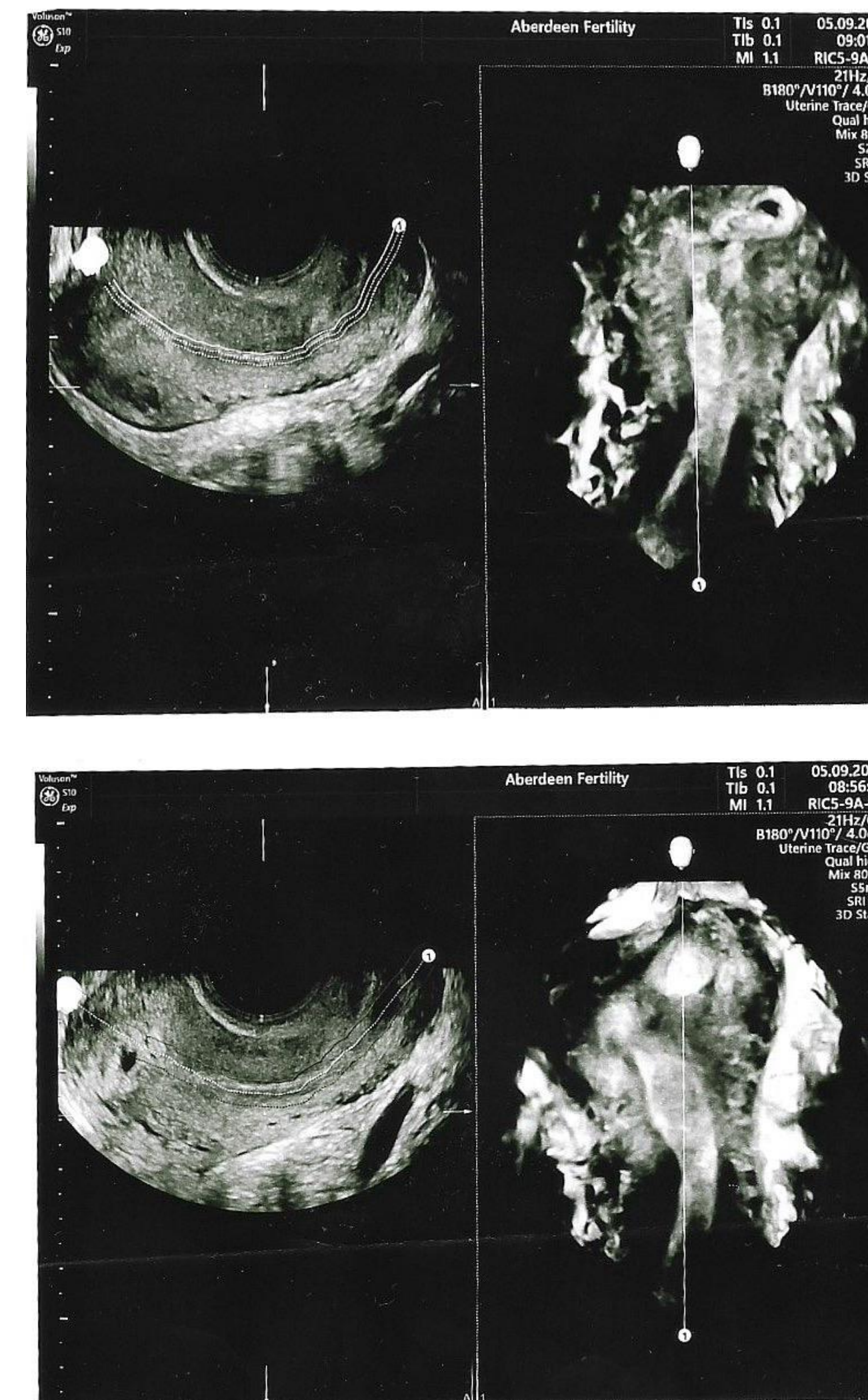


Image 1 and 2 - Left interstitial ectopic pregnancy identified on 3D USS

Discussion

The “classical” findings on 2D USS for interstitial pregnancy are an empty uterine cavity, products of conception or gestational sac located laterally in the interstitial part of the tube and surrounded by <5 mm of myometrium in all imaging planes, and presence of the ‘interstitial line sign (RCOG, 2016).

However, as can be seen in this case, an interstitial pregnancy can be mistaken for a correctly sited one and a persistently positive pregnancy test following management of miscarriage must always prompt timely and thorough assessment along with high clinical suspicion of a missed ectopic pregnancy.

Conclusion

Although 3D ultrasound is not readily available in many EPAUs it has shown itself to be a useful adjunct where diagnosis is in doubt, providing

optimised coronal fundal views in a more time- and cost-effective manner than magnetic resonance imaging (MRI). Although 3D ultrasound is not readily available in many EPAUs it has shown itself to be a useful adjunct where diagnosis is in doubt, providing optimised coronal fundal views in a more time- and cost-effective manner than magnetic resonance imaging (MRI).

This case also demonstrates the appropriate use of medical management with methotrexate where fertility preservation was a significant concern.

References

Royal College of Obstetricians and Gynaecologists
[RCOG] (2016) Diagnosis and Management of Ectopic
Pregnancy. Green-top Guideline No. 21.

Nguyen T Ha, **Interstitial Ectopic Pregnancy**, Visual Encyclopedia of Ultrasound in Obstetrics and Gynaecology, www.isuog.org, January 2022.