Atypical corpus luteal cyst in a pregnancy of unknown location with concurrent ITP: a diagnostic and management dilemma.

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Background

Pregnancies of unknown location (PULs) are challenging, especially with concurrent adnexal abnormalities. This case describes a suspected ovarian ectopic which was histologically corpus luteum complicated by significant thrombocytopenia, return to theatre and missed miscarriage. Where ovarian ectopic pregnancies do occur, they are a rare entity which accounts for approximately 3.2% of ectopic pregnancies.[1] Although ovarian ectopic is rare, it is a dangerous condition which has a higher risk of severe haemoperitoneum than tubal ectopics (45% compared to 8%, OR 9.4).[2] This case discusses the challenge in management when concerns are raised for a rare but dangerous pathology in a patient with haematological pathology.

Aim

To discuss a complex PUL with concurrent immune thrombocytopenic purpura (ITP).

Case

A 28-year-old para 2 with recently diagnosed chronic ITP presented with pain and bleeding at 5 weeks gestation. Investigations included a hCG of 451 u/L, a platelet count of 68 x10^9/L and transvaginal ultrasound demonstrating a complex cystic structure inseparable from the left ovary and a separate corpus luteum in the right ovary but no intrauterine pregnancy. Given increasing pain, a diagnostic laparoscopy was performed with haematology recommending only tranexamic acid for perioperative management. Laparoscopically, there was no evidence of rupture. The suspicious left ovarian cyst was removed without uterine instrumentation. Tubes and contralateral ovary were normal aside from an evident corpus luteum, consistent with ultrasound appearances.

Results:

Histology of the excised left ovarian cystic structure revealed a corpus luteum. Progesterone supplementation was commenced. The postoperative course included worsening thrombocytopenia to a nadir of 37 x10^9/L and return to theatre for a repeat laparoscopy and washout of 300 mL haemoperitoneum. Haemostasis was achieved with haemostatic agent application to site of suspected bleeding from the left ovarian cyst base. Given the deteriorating platelet count and postoperative bleeding with return to theatre, haematological management included intravenous immunoglobulin (IVIG), platelet transfusions and corticosteroids. Rising hCG levels prompted serial ultrasounds which eventually demonstrated missed miscarriage of intrauterine pregnancy. An uncomplicated suction, dilation and curettage was performed after IVIG and tranexamic acid administration.

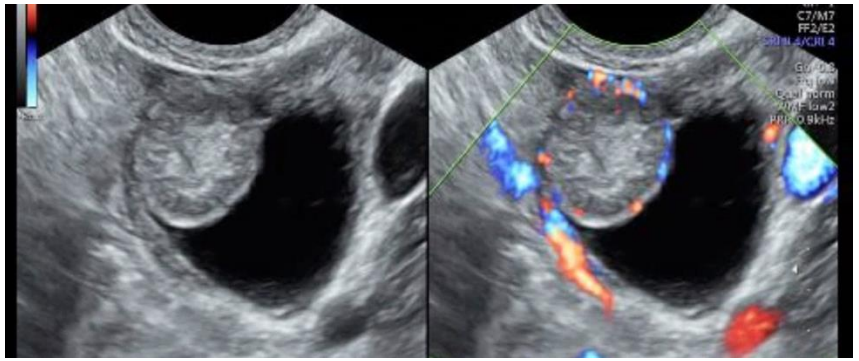

Figure 1: Ultrasound appearance of a complex left adnexal structure inseparable from the right ovary. Cystic component measured up to 27mm while solid component measured 17mm and demonstrated peripheral vascularity. normal stomach was noted.

Discussion:

Learning points from this case include the importance of caution with a possible ovarian ectopic, and any ectopic with diagnostic ambiguity. To minimise disruption to a possible IUP, uterine instrumentation should be avoided, and progesterone supplementation should be considered when a possible corpus luteum is removed. A multidisciplinary approach with haematology consultation is paramount in patients with platelet or coagulation disorders. A technical surgical factor to consider in patients with high bleeding risk is releasing insufflation slowly under vision to assess for venous bleeding that commences once the intra-abdominal pressure normalises.

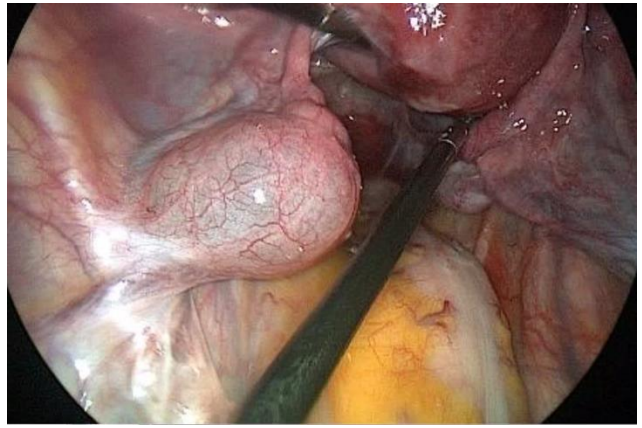

Figure 2: Laparoscopic appearance of left ovarian structure which was histologically a corpus luteum. Intraoperative appearance matched ultrasound appearance well, with serous fluid from the cystic component and an inner solid mass.

References

1. Bouyer J, Coste J, Fernandez H, Pouly JL, Job-Spira N. Sites of ectopic pregnancy: a 10 year population-based study of 1800 cases. *Hum Reprod*. 2002;17(12):3224-3230. doi:10.1093/humrep/17.12.3224
2. Solangon SA, Naftalin J, Jurkovic D. Ovarian ectopic pregnancy: clinical characteristics, ultrasound diagnosis and management. *Ultrasound Obstet Gynecol*. 2024;63(6):815-823. doi:10.1002/uog.27549