

Tubo-Ovarian Abscess with Elevated Ca-125 and Normal Inflammatory Markers: A Case Report

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Background

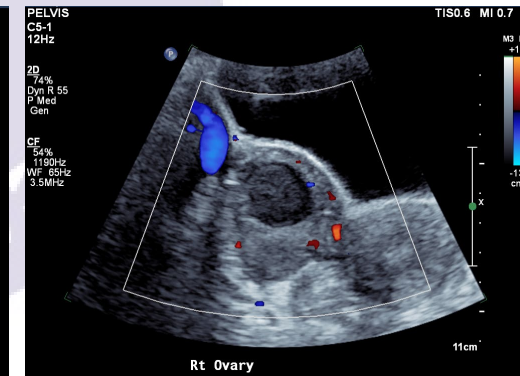
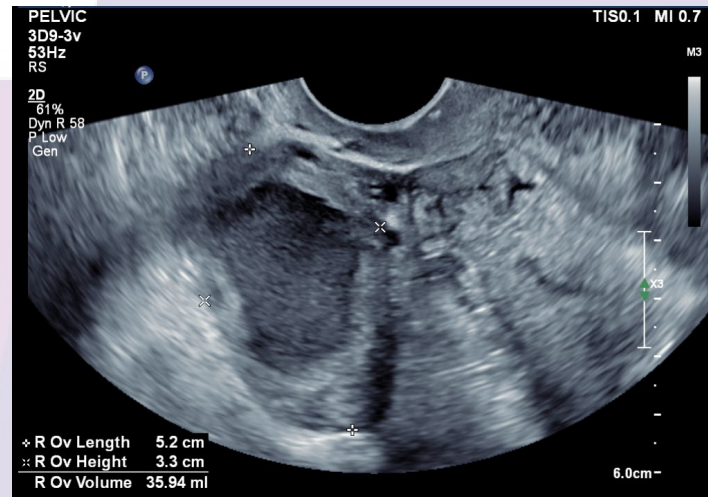
Tubo-ovarian abscess (TOA), one of the most severe complications of pelvic inflammatory disease (PID), is classically associated with pyrexia, pelvic pain, raised inflammatory markers and indicative radiological findings¹. Whilst Ca-125 elevation is commonly associated with ovarian malignancy, it can be seen in benign conditions including PID and other inflammatory diseases². This case report highlights an atypical presentation of TOA, with equivocal ultrasound findings, normal white cell count (WCC) and C-reactive protein (CRP) and elevated Ca-125.

Case

A 48-year-old presented with acute-onset right iliac fossa pain, on a background of several months of heavy menstrual bleeding. She denied fevers or abnormal vaginal discharge and reported a stable sexual partner. WCC and CRP were unremarkable. Ca-125 was significantly elevated at 510 kU/L (normal value <35 kU/L). CA 19.9 and CEA were normal. Ultrasound revealed a 38mm well-defined hypoechoic right ovarian mass, reported as likely a haemorrhagic cyst or endometrioma, with no significant free fluid in the pelvis. On day-3 of admission a laparoscopy was performed in the setting of worsening pain and concerns for torsion. A right TOA was identified, draining frank pus. Drainage and washout were performed and antibiotics for PID were commenced. Hysteroscopy, dilatation & curettage were also performed in the setting of the patient's menorrhagia history.

Outcomes

Recovery was unremarkable. Intra-op swabs later returned positive for chlamydia. At follow-up three months post-op, repeat Ca-125 had normalised and test of cure for chlamydia was negative. Menorrhagia had improved on Primolut.



Figures 1&2: Ultrasound imaging of the patient's right ovary

Discussion

TOA can be associated with significant morbidity if not recognised and managed appropriately, however diagnosis can be challenging in some instances. Pyrexia and elevated inflammatory markers are strongly predictive of TOA in patients with PID, however their absence does not exclude TOA as a differential^{1,2}. Elevated Ca-125 in isolation is poorly predictive of malignancy; Ca-125 is expressed widely, including in peritoneal and fallopian tissues, and its elevation has been shown to be highly predictive of TOA in patients with PID². TOA can mimic numerous pathologies on ultrasound; additional imaging modalities with higher sensitivity and specificity for TOA, such as MRI, can assist with diagnosis if clinically appropriate and available^{1,3}.

Acknowledgements

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2. Lee S, Rhim C, Kim J, et al. Predictive Markers of Tubo-Ovarian Abscess in Pelvic Inflammatory Disease. *Gynecol Obstet Invest* 2016;81(97-104). DOI: 10.1159/000381772.
3. Lee D, Swaminathan A. Sensitivity of Ultrasound for the Diagnosis of Tubo-Ovarian Abscess: A Case Report and Literature Review. *The Journal of Emergency Medicine* 2011;40(170-175). DOI: 10.1016/j.jemermed.2010.02.033.