

Incidental Mucinous Cystadenoma with Stromal Luteinization Associated with Pregnancy

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CLINICAL IMAGE

A 21-year-old female presented for routine prenatal care. Imaging studies showed an intrauterine pregnancy and a large, left ovarian cyst measuring 9 cm. At 39 weeks gestation, the patient underwent cesarian section delivery of a normal, viable infant and the removal of the left ovarian cyst was also performed. On gross macroscopic examination, the cyst measured 14 x 13 x 6 cm and had a smooth outer surface. Sectioning of the cyst showed a smooth inner cyst wall and clear watery fluid. Microscopic examination showed the tumor was composed of a cyst wall lined by a single layer of columnar cells with abundant intracellular mucin. The columnar cells' nuclei were basally located without atypia. Beneath the lining epithelium, there were prominent dense cohesive sheets of large polygonal cells with eosinophilic to clear cytoplasm and a central round nucleus, consistent with luteinized stromal cells. The cyst was diagnosed as a benign mucinous cystadenoma with stromal luteinization.

The incidence of ovarian tumors complicating pregnancy ranges between 1% and 2% with the majority of these ovarian tumors being benign; however, malignancy does occur, and shows an incidence of 1/10,000-50,000. There are different approaches to the adnexal masses during pregnancy such as elective surgery during the second trimester, emergent surgery due to complication and watchful waiting. As this adnexal mass was not complicating the patient's pregnancy, the decision for watchful waiting and surgical management during delivery was chosen.

The case highlights the occurrence of adnexal tumors during pregnancy and stresses the importance of pathologist's recognition of ovarian stromal Leydig cell hyperplasia associated with pregnancy and not confusing it with tumor.

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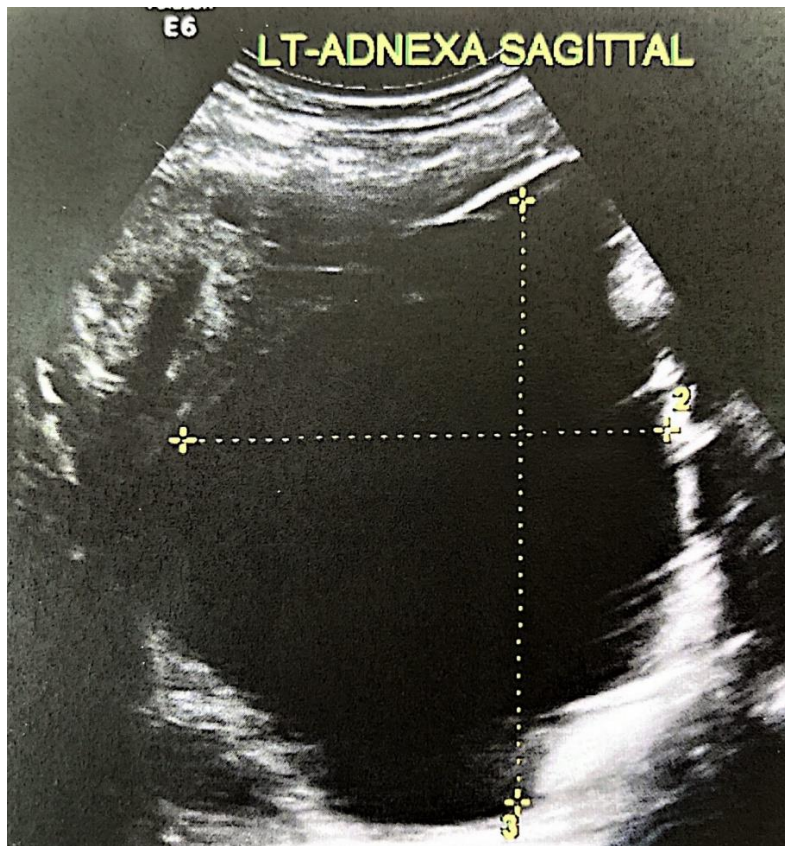


Figure 1: Ultrasound of left ovarian cyst showing a simple, uniloculated cyst.

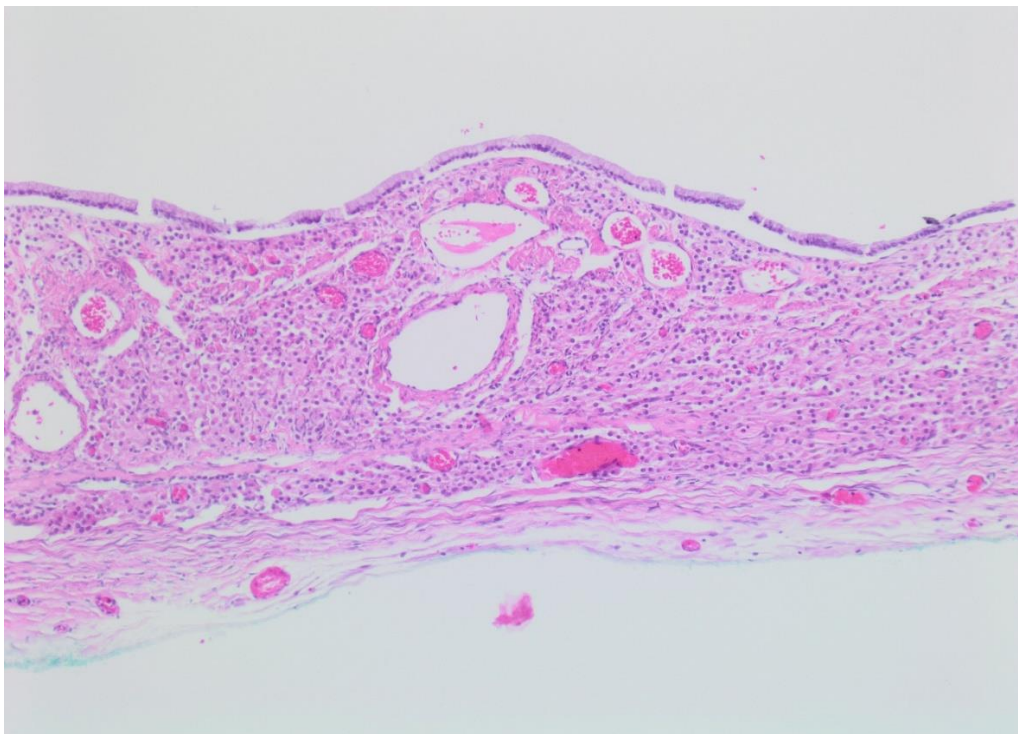


Figure 2a: Scanning view of the left ovarian cyst showing the characteristic columnar, mucinous epithelial lining and underlying stromal Leydig cell hyperplasia (stromal luteinization). (Hematoxylin-eosin, original magnification x10).

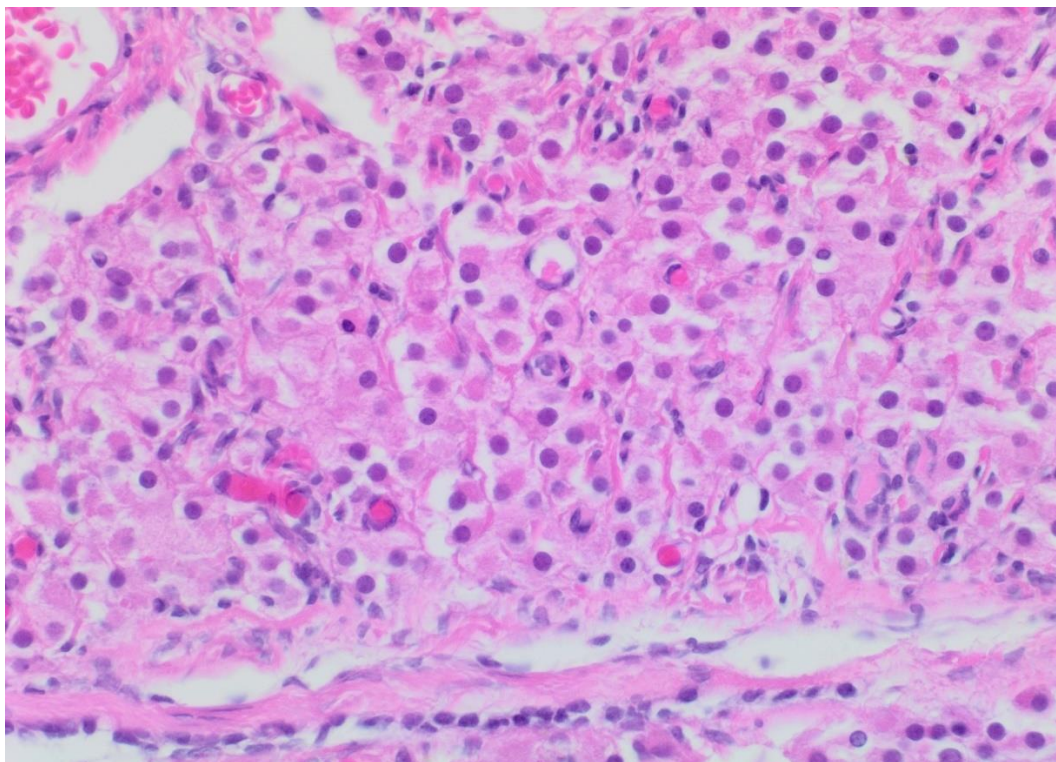


Figure 2b: Higher magnification highlighting the Leydig cells. The polygonal Leydig cells have abundant eosinophilic cytoplasm and single round nucleus. (Hematoxylin-eosin, original magnification x20).