Images in Gynecologic Surgery

Stop, Think, and Re-evaluate: A Decidualized Endometrioma can Mimic Malignancy in Pregnancy

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A 32-year-old patient at 28 weeks of gestation was referred for evaluation of a growing left adnexal mass on her routine pregnancy-related ultrasounds and elevated CA 125 at 134kU/L. She had a remote surgical diagnosis of stage III endometriosis, including drainage of left ovarian endometrioma. She had evidence of a persistent left endometrioma on ultrasounds prepregnancy.

At presentation to our center, magnetic resonance imaging was performed, thinking this would help clarify the diagnosis, which raised concern for primary ovarian malignancy (Fig. 1A). Consultation with gynecology oncology resulted in a recommended salpingo-oophorectomy at the patient’s planned cesarean section. Subsequently, a new gynecologic surgeon-sonologist (ultrasound specialist) joined the team and performed a transvaginal/transabdominal (including Doppler) ultrasound, raising the possibility of a benign decidualized endometrioma. Decidualization is a progesterone-mediated change to an endometrioma, resulting in rapid increasing size and development of irregular and vascular solid components [1,2], mimicking malignancy on imaging. Specific patterns helped differentiate this from a malignancy: rounded papillary projections on the background of unilocularity and ground glass echogenic content despite very strong blood flow (Fig. 1B and C) [3].

The patient decided to forgo the salpingo-oophorectomy. Instead, she consented to an ovarian cystectomy at her

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cesarean section, at which we identified severe endometriosis and adhesions between the left ovary and uterus/pelvic sidewall/bowel. No concerns for malignancy (eg, metastases) were identified. The cyst content was compatible with an endometrioma. The appearance of the cyst wall was consistent with decidualization (Fig. 2A). A cystectomy was performed, and histopathology confirmed endometriosis with extensive stromal decidualization and no malignancy (Fig. 2B).

In this case, we demonstrate that awareness of decidualized endometriomas combined with understanding prepregnancy history and the sonographic features of decidualized endometriomas aided in resolving the diagnostic dilemma of an ovarian mass in pregnancy [4]. Consequently, we prevented an unnecessary oophorectomy and reduced the anxiety that arose secondary to the concern for malignancy.

References
