SYMPOSIUM: PET-CT scan in pediatric oncology

Resection and reconstruction of mediastinal great vessels in invasive thymoma

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Presence or absence of normal ovarian tissue adjacent to adnexal mass: A discriminative sonographic sign to suspect malignancy

Sir,

It has been claimed that the presence of normal ovarian tissue adjacent to an adnexal mass, ovarian crescent sign (OCS) excludes the likelihood of a malignant lesion. And it is considered to be a reliable and simple sonographic marker in preoperative evaluation.

We studied 60 women attending gynecology service with adnexal mass requiring surgery. Ultrasound scanning was done by a single gynecologist who was not aware of the clinical details. Criteria suggested by Hillaby et al. were used for identifying OCS. Its presence or absence was correlated with the histopathology examination report of the tumor obtained at surgery.

Ovarian crescent was identified in 65% of the cases (39 of 60 cases; 38 benign and 1 malignant disease) scanned. There were 11 malignant cases on histopathologic examination. Of the 39 cases with positive OCS, 38 masses (97.4%) were later found to be benign. In the absence of OCS, 10 of 21 cases (47.6%) were malignant, thus giving the clinician a tool with high specificity (90.9%), positive predictive value (97.4%), and a respectable sensitivity (77.6%) in prejudging the nature of adnexal masses.

The OCS was not seen in 10 of the 49 benign cases—4 cases of mucinous cystadenomas, 2 cases of endometrioma, and 1 case each of ovarian abscess, fibroid, ovarian fibrothecoma, cystic teratoma, and serous cystadenoma. The benign lesions with absent ovarian crescent sign had significantly higher mean ovarian volume than those with a positive sign (1272.5 and 454.3 mL, respectively; \( P = 0.037 \)). If the size of adnexal mass was more than 50 cm³, the proportion of cases with absent OCS was higher (absent OCS in mass > 50 cm³: benign 7 of 11, 63.6%; malignant 5 of 10, 50%)—although the difference was not statistically significant.

Thirty-one percent of the cases studied (19 of 60) were postmenopausal. The visualization of the OCS among all the cases studied was significantly poorer in postmenopausal women (9 of 19 postmenopausal, 47.4%; 30 of 41 premenopausal, 73.2%; Chi-square test 3.799, \( P < 0.05 \)). When analyzed for only benign cases, the difference was not significant (9 of 14 postmenopausal; 29 of 35 premenopausal; Chi-square test 1.98, \( P = 0.15 \)).

Data from all the 3 reported studies by the same group suggests that OCS is more often present in benign lesions (270 of 306 cases, 88%) and absent in malignant lesions (72 of 75 cases, 96%). The identification of OCS may get masked in the case of masses with multiple cysts or heavily echogenic shadows as in fibromas, dermoid cysts, endometriomas, and abscesses. In such cases reliance on the crescent sign should be viewed in the backdrop of other clinical characteristics. In addition, probability of failure to identify normal ovarian tissue in large ovarian lesions should be borne in mind.

We wish to reiterate that one should look for the crescent during pelvic ultrasound evaluation of adnexal masses.

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Letters to Editor