Case 588

Eurorad

Ovarian dermoid cyst: bilateral finding in young woman

Published on 19.10.2000

DOI: 10.1594/EURORAD/CASE.588
ISSN: 1563-4086
Section: Genital (female) imaging
Imaging Technique: Ultrasound
Imaging Technique: Ultrasound
Imaging Technique: CT
Imaging Technique: MR
Imaging Technique: CT
Case Type: Clinical Cases
Authors: C. Cappelli, G. Lupi, S. Mazzeo, E. Neri, C. Bartolozzi
Patient: 24 years, female

Clinical History:

Pelvic Pain
Imaging Findings:

The patient, who complains pelvic pain, was referred to our institute for US evaluation. US imaging revealed bilateral ovarian lesions with polymorphic appearance. A pelvic spiral unenhanced and enhanced spiral CT was performed for further evaluation.

Discussion:

Ovarian dermoid cyst or benign cystic teratoma is a benign tumor descending from germinal cells. In about 80% of the cases this lesion occurs in young women (20-30 years old) and represents the 18% of benign ovarian tumors. In most cases dermoid cysts are unilateral but in the 15% of the cases are bilateral. Typically their diameter is smaller than 10 cm, rarely more than 15 cm. Dermoid cyst can be composed by elements descending from all the three germinal layers, but in ovarian ones frequently ectodermic differentiation occurs. On histological examination lipidic substance, hair, sebaceous secretions, hair follicles and eggshell calcifications were seen in the 50% of the cases; real organoid structures (teeth, fragments of bone) in the 30% of the cases. Frequently symptoms arise acutely with abdominal and pelvic pain and in the 15% of the cases they are associated with menstrual abnormalities. Suppuration and rupture are possible but uncommon complications. Malignant degeneration occurs in the 1-2% of cases usually originating from squamous epithelial cells. At plain radiography of abdomen dermoid cyst can be easily detected if calcifications are present. Sometimes a typical radiographic finding of dermoid cyst, the "fat floating" (corresponding to the "fat-fluid level" on US and CT features) appears; this radiographic sign is an horizontal line between two soft tissues of different opacity. It is caused by oily and sebaceous fluid floating over serous and over intracystic debris. At US examination it has a polymorph appearance because of different prevalence of the three histological structures; in most cases dermoid cysts are complex masses with both liquid and solid components. They contain hyperechoic material (due to hair, teeth and fat) and hypoechoic areas due to fluid material. On CT imaging areas with low HU density, corresponding to fat, mixed with high density structures can be suggestive of dermoid cyst.
Differential Diagnosis List: Bilateral ovarian dermoid cyst.

Final Diagnosis: Bilateral ovarian dermoid cyst.

References:

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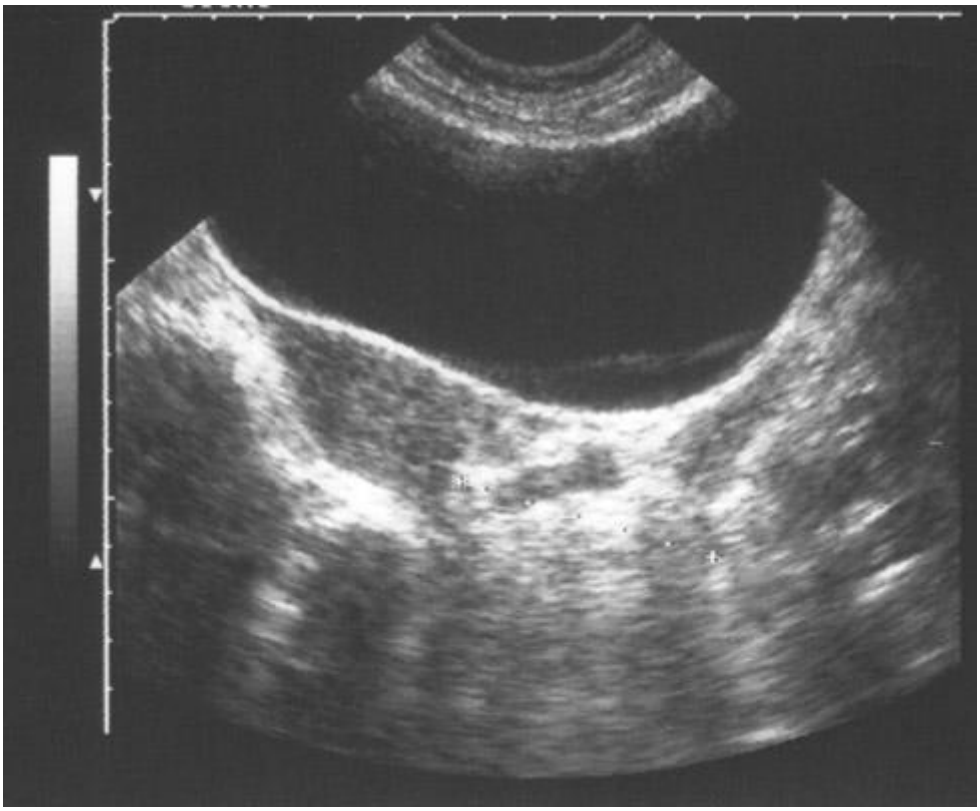
Figure 1

a

Description: Right ovary. A small hyperechoic lesion, with lipidic components is evidenced within the right ovary. **Origin:**

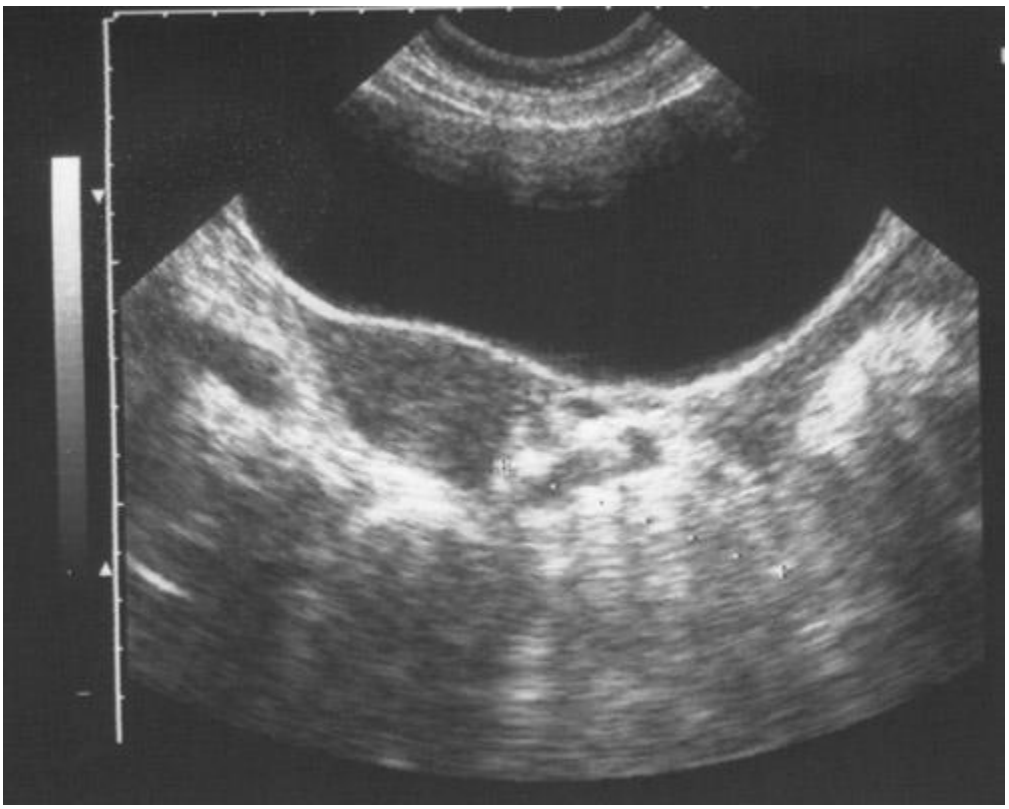
Figure 2

a



Description: Left ovary. A polymorphe mass (6 cm in diameter) with both hyperechoic and hypoechoic areas is revealed. **Origin:**

b



Description: Left ovary. A polymorphe mass (6 cm in diameter) with both hyperechoic and hypoechoic areas is revealed. **Origin:**

Figure 3

a

Description: A hypodense lesion (15 mm in diameter) is evident into the right ovary. At left, behind the uterus, a mass (4 cm in diameter) is present. **Origin:**

b

Description: A lesion (15 mm in diameter) is evident into the right ovary. At left, behind the uterus, a mass (4 cm in diameter) is present. **Origin:**

Figure 4

a

Description: The left lesion, with heterogeneous contents, is delimited by thin walls. A calcification is evidenced into the lesion. **Origin:**

Figure 5

a

Description: A small nodule of fat density is present within the right ovary. The left lesion also contains lipidic substances (negative HU density). The fatty component is adequate to identify these masses as dermoid cysts. **Origin:**