

A PARTICULAR CASE OF OVARIAN TERATOMA IN A CHILD

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Abstract

Ovarian teratoma or dermoid cyst is usually a benign ovarian tumour composed of a combination of tissues including epithelia, hair, teeth, bone fragments, thyroidal tissue, sebum, etc. This paper presents the case of a 4-year-old girl admitted in emergency with clinical signs suggesting the onset of acute appendicitis. The symptomatology, however, was the result of presence of right ovarian teratoma with torsion.

Key words: ovarian teratoma with torsion, child

Introduction

Ovarian teratoma or dermoid cyst is a round or oval shaped dysembryoma, with gray, ashen or yellowish, smooth, opaque or bright surface, having typically renitent consistency. Inside, we find organ rudiments originating in the three embryonic layers (ectoderm, mesoderm, and endoderm): cartilaginous, osseous, and muscle tissues, hair, teeth, nails, digestive or respiratory glandular epithelia, multi-layer pavement epithelium, thyroidal tissue and other tissues incorporated into a yellowish fat substance or sebum. Embryo fragments may sometimes be found.^{1,2}

It has variable size, ranging from few centimetres to gigantic dimensions when it fills up the abdominal-pelvic cavity.

It is a unilocular, pediculate mobile tumour with well defined borders, having its own wall, and being usually located unilaterally.

Clinically, it has polymorphic symptomatology, while the cyst may be asymptomatic for long time. The diagnosis is made when the tumour becomes palpable, which is uncommon in children, or when one of the complications occurs.

Complications that may occur are:

1. Malignization – the most severe complication. Dermoid cysts are quite always benign tumours, but may become malignant.^{3,4} Rapid growth of tumour that becomes immobile, onset of pain, adherence to adjacent organs (uterus, intestine), change in consistency, which becomes uneven and irregular, vascular compression disorders with oedema in lower limbs, worsening of general health accompanied by weight loss and ascitic fluid are all signs of malignization.^{5,6}

2. Torsion is a frequent complication. It is seen in heavy, not very large cysts with a long pedicle. The symptoms are: onset of long-lasting acute pain, vegetative phenomena (vomiting, accelerated pulse).

3. Compression of surrounding organs and tissues followed by obstructive symptomatology.

4. Rupture – may be secondary to a trauma, torsion or intracystic haemorrhage. The cyst can rupture into the peritoneal cavity or rarely into an abdominal organ (urinary bladder, small bowel, rectum, sigmoid colon, and vagina).^{7,8} The signs of rupture are: syncopal pain, signs of shock due to peritoneal irritation, cyst disappearance.

5. The infection is manifesting by: pain exacerbation, increase of body temperature, increased parietal defence. The most commonly implicated organisms are Coliform bacteria.^{9,10}

Case presentation

The child CI, female gender, 4 years of age, of normal height and weight, is brought by her parents in the Emergency Room of the County Clinical Emergency Hospital on January 19, 2010 and admitted for abdominal pains starting 24 hours before, accompanied by nausea, vomiting, subfebrilities, and agitation.

Abdominal examination is difficult as the girl is frightened, cries, and voluntarily contracts her muscles. A painful sensitivity in the right iliac fossa is observed during inspiration periods, in the general clinical context suggesting the onset of an acute appendicitis.

Symptoms improvement and calming of patient after acquainting with the hospital room allows us to repeat under appropriate conditions the clinical examination, during which we find a normal abdomen that participates in the respiratory movements. A slight sensitivity is still present at the palpation of the right iliac fossa.

An *abdominal ultrasound* is performed, revealing the presence of a 4.8/3.5 cm tumour formation located posterior to urinary bladder, slightly right paramedian, of inhomogeneous aspect, showing hyperechogenic areas alternating with hypoechogenic and transonic areas, and 2 calcifications with posterior shadow cone – right ovarian tumour.

Laboratory analyses indicate: Erythrocytes = 4.03; Hb = 11.4; Ht = 33.6; Leucocytes = 7.47; Platelets = 326000; Urea = 17; Creatinine = 96; Glycaemia = 73; TGO = 23; TGP = 10; alkaline phosphatase = 168.72; LDH = 270; C reactive protein = negative; fibrinogen = 187; VSH = 123. Levels of CA125, the antigen specific to ovarian tumours, were in normal limits.

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We decide to perform *native and contrast CT examination* that during early and late stages indicates the following:

- At the pelvis level, anterior to rectum a space-replacing formation is evidenced, with mixed structure comprising lipid densities and included calcareous formations, as well as multiple cystic formations, with moderate absorption of contrast medium in the parenchyma, without contrast medium absorption at the cystic and calcareous components level. The lesion measures 3.5/5 cm in maxim axial diameters, well delimited, involving the right ovary, but neatly demarcated of the uterine corpus and anterior rectal wall, with urinary bladder compression and displacement.

- The urinary bladder presents walls with neat borders, homogenously opacified after 10 minutes.
- No pathological adenopathies at the retroperitoneal or pelvic levels are evidenced.
- No free fluid in the abdominal pelvic cavity is visualised.

Conclusions of CT Exam

Retrovesical space-replacing formation, involving the right ovary with aspect indicating most probably a dermoid cyst, presenting mixed content, lipomatous, liquid and multiple calcifications, neatly delimited of the uterine corpus and anterior rectal wall, impressing the urinary bladder, without invading the neighbouring structures (figure 1).

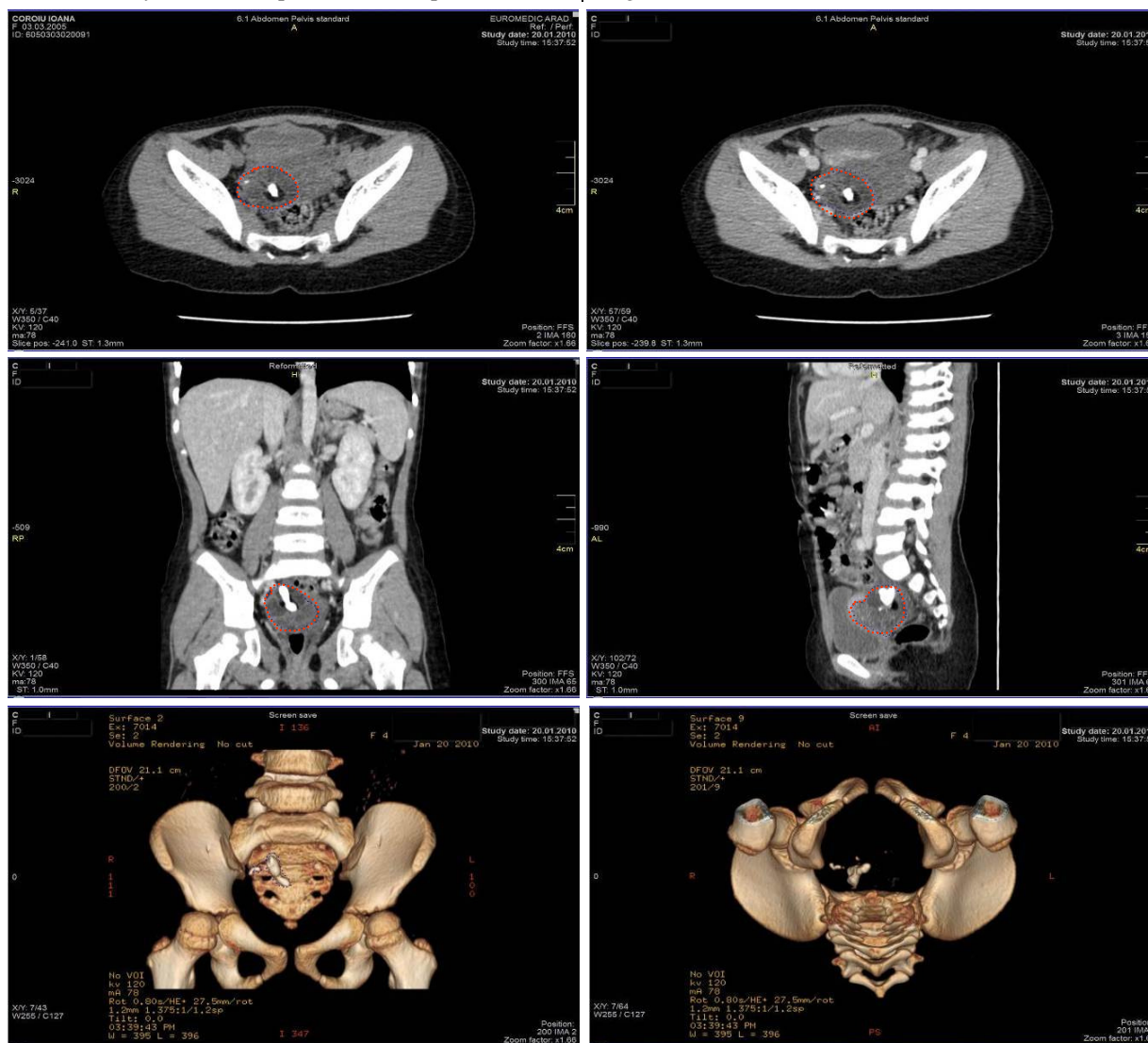


Fig. 1. CT aspect of cystic teratoma of the right ovary with calcifications.

Treatment

Surgery is performed on January 26, 2010 and subumbilical minilaparotomy under general anaesthesia is carried out. A right ovarian tumour formation, torsioned, extended into the Pouch of Douglas, with maximum

diameter of approximately 5 cm, relatively round in shape, violaceous in colour, with neat and bright surface is evidenced. Ablation of tumour formation, preventive appendectomy and drainage of Pouch of Douglas are performed. No post-operative complication occurred,

allowing the removal of threads and discharge of patient 7 days after the surgery.

Histopathological exam of the resected formation reveals:

Mature cystic ovarian teratoma containing skin, hair follicles, hair, one molar tooth and nervous tissue (figure 2),

with areas of chronic granulomatous inflammatory reaction and “foreign body” multinucleated giant cells and ovarian, pericyclic, intraparenchymal haemorrhagic foci; two resting primordial follicles are present.

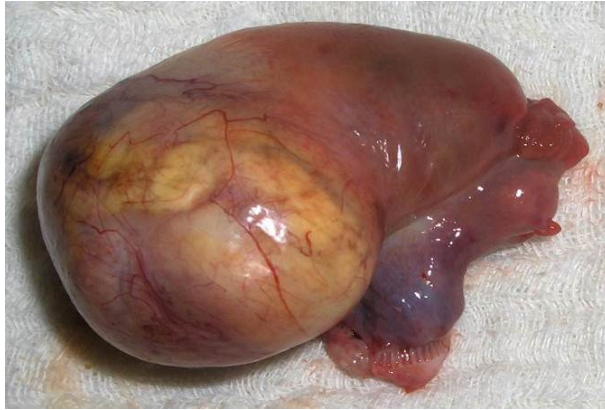


Fig. 2. Macroscopic aspect of torsioned cystic teratoma of the right ovary.

Conclusions

Ovarian teratoma, more frequently seen in adult females, can be rarely diagnosed in the first years of life.

It is usually asymptomatic, while the first sign is most frequently represented by the increase of abdominal volume through tumour growth.

It is occasionally diagnosed following a complication, most often represented by torsion.

When it is located on the right side, the symptomatology may be confused with that in acute appendicitis.

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