

Ovarian Torsion Caused by Teratoma: A Case Report

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ABSTRACT

Mature teratomas are benign ovarian tumors, which are generally asymptomatic. They rarely cause ovarian torsion. A typical clinical picture associates an abdominal pain with adnexal sensitivity and palpable mass. The imaging aspect of mature teratoma or dermoid cyst is typical. The ultrasound, CT scan, and the MRI play a crucial role in the diagnosis of adnexal torsion with the ovarian teratoma.

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Introduction

Mature teratomas or dermoid cyst represents 20% of ovarian tumors. They rarely cause ovarian torsion. The clinical picture can simulate other causes of acute abdomen. We report the case of a 28-year woman with ovarian torsion caused by teratoma. The objective of this article is to demonstrate CT scan findings that can point to ovarian torsion in case of an evocative clinical picture so as not to delay the diagnosis.

Case report

A 28-year-old woman, with no notable medical history, consulted for severe pelvic pain predominant at the right iliac fossa, evolving for 2 days without any notion of metrorrhagia or a delay in menstruation. Clinical examination found an abdominal distension with sensitivity marked at the right iliac fossa with a palpable pelvic and abdominal mass. The biological check-up showed hyperleukocytosis (White cells = 1000/mm³) with negative B-HCG. A pelvic ultrasound revealed a voluminous right ovarian mass containing cystic and solid components with areas of increased echogenicity. To determine the nature of the mass in question, a pelvic CT scan was performed.

CT scans confirmed the presence of a pelvic and abdominal mass lateralized to the right with different components: tissue, fat and cystic and containing a calcification (figure 1). The right ovary was unseen and the left ovary appeared with no abnormality. Furthermore, CT scan revealed fat infiltration with pelvic effusion (figure 2). The nature of the mass is typical of an ovarian teratoma. Faced with acute in onset pain, adjacent fat infiltration and pelvic effusion, the diagnosis of a twisted right ovarian teratoma was made. An emergency laparotomy was performed. The surgical data were in favor of a right ovarian torsion with ovarian teratoma (figure 3). The post-operative evolution was favorable.



Figure 1 . sagittal (a) and axial (b) abdominal CT images with IV contrast showing a pelvic and abdominal mass arriving at the umbilicus, with tissular, fat and cystic components (arrow). Note microcalcifications and pelvic effusion (Asterix).



Figure 2 . axial abdominal CT image after contrast injection showing the abdomino-pelvic mass developed at the right annex containing a cystic, fat, and tissular component with calcification (arrowhead) .Note adjacent fat infiltration (Asterix).

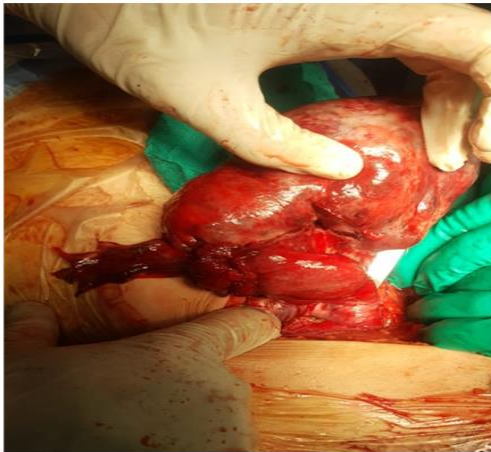


Figure 3. Photo taken intraoperatively confirming the diagnosis of the right ovarian torsion with mature teratoma.

Discussion

Mature teratomas or dermoid cysts account for 20% of ovarian tumors in adults. The content of the cyst is variable: fat, hematic liquid, skin appendage, bone, tooth... [1].

Generally, teratomas are asymptomatic. They rarely cause an ovarian torsion; in this case, the typical clinical picture associates an abdominal pain with an adnexal sensitivity and a palpable mass, but most often the torsion presents itself as non-specific acute pelvic pain. The clinical picture can simulate other causes of acute abdomen such as appendicitis, diverticulitis or renal colic. The torsion is more common in the right ovary because the mobility of the left ovary is relatively limited by the presence of the sigmoid colon [2, 3, 4].

On ultrasound, the teratoma may have three different aspects: cystic mass with echogenic parietal nodule (Rokitansky nodule), a well-circumscribed echogenic mass, which is not vascularized on color doppler, or mass with fat-liquid level. The fat component is not always easy to be highlighted, hence the interest of the CT or the MRI [1, 4, 5].

The MRI highlights the different elements of the cyst: the fat component is hyperintense on T1 and T2-weighted images

and decreases on fat-suppressed images; the cyst wall is thin; the solid component have variable signal [1].

Imaging also have an important role in guiding the diagnosis of adnexal torsion with ovarian teratoma.

The aspect of the torsion in CT scan includes increased ovarian volume with or without ovarian mass, a twisted pedicle, a thickening of the fallopian tube and the cyst wall. Although these characteristics are similar to those observed on ultrasound, CT scan may show additional findings to guide the diagnosis such as the deviation of the uterus towards the side of the teratoma, vascular engorgement on the twisted side, pelvic effusion, an adjacent fat infiltration, and less frequently hemoperitoneum [2].

Conclusion

Twisted ovarian teratoma is an infrequent entity. The aspect of teratoma is generally evocative; however, we must evoke the diagnosis of twisted cyst in front of an acute clinical picture with suggestive imaging signs. Any painful ovarian teratoma is twisted until proven otherwise.

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