

Case No. 12

S.F. - 30 year-old woman

Medical history

Removal of a dermoid cyst of the right ovary at approximately 20 years of age

Onset of current disease

Abdominal pain, vomiting of bile, fever. Emergency hospitalization in our Division with diagnosis of acute abdomen.

Physical Examination

The patient presented with abdominal pain, fever (axillary 38° C; rectal 39.5° C), tachycardia. Abdomen was poorly palpable due to muscular wall contractions, above all in the lower right quadrant, where pain was particularly strong and where unlimited tumefaction was seemingly palpable. Pain of Douglas' pouch on rectal exploration. Abdominal ultrasonography revealed little. On completion of all usual preoperative tests (neutrophil leukocytosis) the diagnosis of acute abdomen is confirmed, presumably due to acute appendicitis (appendicular abscess?), with an alternative diagnosis of possible torsion of the right ovary.

Surgery is performed.

Surgical procedure (see video)

Umbilical open-laparoscopy (Hasson trocar).

The pneumoperitoneum is established with CO² at 12 mm Hg. Exploration of the peritoneal cavity: a large and grossly spherical formation is found, approximately 10 cm in diameter, which practically substitutes the right ovary and adheres to the peritoneal wall, to the cecum, to the appendix and to the iliac vessels. No other sign of disease is seen. Lysing of the adhesions and freeing of the cecum and appendix, which both appear to be normal. Detachment of the mass from the iliac vessels and identification of the ureter. Interruption of the tube and of the ovarian vessels (harmonic scalpel). Application of a clip to the residual stump of the tube. Complete liberation and extraction in bag of the mass. Control of hemostasis, toilet of the abdominal cavity. Evacuation of the CO². Suture of the ports.

Pathology

Macroscopic - the mass is roughly 10 cm in diameter, bluish in color, and on sectioning shows a cystic structure with thickened walls and dense, hematic liquid contents. The ovary is reduced to meager remains, with other cysts containing clear liquid.

Microscopic - after appropriate and ample sampling, histological sections show that the larger cystic formation with hematic contents is lined with by numerous layers of elements filled with eosinophilic, luteal-type cytoplasm; the other smaller cysts are follicular.

Diagnosis: ovary with hemorrhagic corpus luteum with cortical follicular cysts.

Regular **postoperative course** and release from hospital after a few days.

No particular findings worthy of mention during **follow-up and outcome**.

Remarks

If during video-laparoscopic exploration we had confirmed the cause of acute abdomen that we had presumed, namely acute appendicitis or, more improbably, torsion of ovarian cysts, this case would be unremarkable. However, evidence of an ovarian cyst without definite features of torsion, as well as signs of a peritoneal reaction characterized by circumscribing adhesions in the absence of any cecum-appendicular phlogistic involvement, beyond eliciting surprise during surgery, warrant a few comments.

First of all, it must be said that the symptomatological picture presented unequivocal features that gave shape to the diagnosis of acute abdomen: the abdominal pain, the defensive abdominal contractions, the intense pain on superficial palpation, the paralytic ileum, the fever and the neutrophilia all clearly pointed to the diagnosis and the need to operate with urgency.

The reasons for a peritoneal reaction to an ovarian cyst remain unclear; indeed, this is the issue that makes this clinical case unusual and difficult to interpret from an etiopathogenetic standpoint.

Let's attempt an analysis.

The disease under discussion was a luteal cyst (cysts of the corpus luteum), which normally do not reach excessive dimensions: the one found in our case was nearly 10 cm in diameter. Cysts of this kind always contain hemorrhagic material, and in our case it was conspicuous. The cyst emerged upwards and outwards from the right iliac fossa. Numerous and dense adhesions fixed it to the anterior abdominal wall, to the cecum-appendicular complex, and to the iliac vessels. This observation would seem to be interpretable as either the outcome of the surgery performed to remove the dermoid cyst, or as a manifestation of a peritoneal event surrounding the neoformation.

As a side note, the onset of luteal cysts in residual ovarian tissue following surgery would seem to be relatively frequent (R. H. Young et al. in Diagnostic Surgical Pathology vol. 2° - S.S. Sternberg).

Nevertheless, these findings shed little light on the acute peritoneal reaction, and we can only speculate on the cause. The most convincing - proffered with a good share of reserve - could be this: acute endocystic hemorrhaging and resulting rapid volumetric increase of the mass - extrication of this from the small basin in the abdominal cavity - partial rotation during this process with some vascular involvement, above all of the venous compartment, and further rapid increase in size. Suffice it to say that the removal of the cyst resolved once and for all the problem.

Despite all of the above, since doubts still persist regarding the pathogenetic interpretation correlating the ovarian disease with the acute peritoneal event, colleagues more expert in gynecological disorders are invited to share their views and opinions on the case.

This case nonetheless offers another point of interest that should not be underestimated, and that is the tremendous advantage afforded by the video-laparoscopic approach, which facilitated the diagnosis and, as a result, made surgical intervention that much easier. It leads one to think about the greater difficulties that would have emerged with a laparotomic procedure and, above all, about the access through the abdominal wall (necessarily enlarged in this case), which would have given rise to scarring episodes no doubt undesirable for the patient's gender and young age.
