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Genital-peritoneal tuberculosis: a case with different diagnostic work up.

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Dear Editor,
We report a case of genital-peritoneal tuberculosis (GTB/PTB) in a 21-year-old woman who presented to us with mild abdominal pain and distension that started three weeks previously. She reported regular menstrual cycle and no previous pregnancy. She had no other signs or symptoms, chest examination was negative. She neither had past medical, surgical history nor history of recent diseases in her family. Abdominal examination revealed a distended abdomen, lower abdominal tenderness, no rebound tenderness.
Abdominal ultrasound showed ascitis and a large complex pelvic mass, involving both adnexa, with multiple thin septa and a solid component that exhibited some vascularization in the power doppler ultrasound study. Computer tomography (CT) showed retroperitoneal lymphadenopathies and peritoneal thickening. Laboratory investigation demonstrated normal white blood cell count, mild microcytic hypochromic anemia, elevated C reactive protein, elevated CA-125. The patient was screened for human immunodeficiency virus (HIV), hepatitis B and C virus, blood, urine and stool infection and all of them resulted negative.
Interferon-Gamma Release Assays test was positive and demostrated a probable *M. tuberculosis* (MTB) latent infection. We performed an ecoguided sample of ascitic fluid for a cytological, microscopic, microbiological and molecular study. The cytology revealed high lymphocyte count and rare reactive mesotelial cells, no malignant cells. Direct microscopic examination, anaerobic and aerobic cultures, Ziehl–Neelsen stain were negative. Polymerase chain reaction (PCR) for MTB complex DNA detection from ascitic fluid resulted positive. Therefore she was started on an intensive course of therapy with isoniazid, rifampicin, ethambutol, pyrazinamide for two months, followed by four months of consolidation therapy with isoniazid and rifampicin. After 4 months, radiological exams reported no more ascitic fluid, decreasing ovaries dimension, reduction of pelvic and lomboaortic lymphadenopathies, overall reduction of peritoneal thikness. At 12 months, pelvic ultrasound demonstrated normal ovaries and no ascites.

Discussion

GTB/PTB is a part of the diagnostic workup of adnexal masses. GTB/PTB classically presents like one of three different anatomical variants: “wet-ascitic type” characterized by large amounts of free or loculated ascitic fluid, “fibrotic type” with the prevalence of adhesions between bowel, omentum and mesentery, “dry plastic type” characterized by a gross inflammatory reaction, diffuse fibrous adhesions and nodules spread all along the peritoneum without ascites. Finally, It can also present as a combination of this three variants.(1)
Peritoneum is the most affected peritoneal structure. The most common finding is a hypoechoic thickening visible under the abdominal wall that reflects chronic inflammation of the peritoneal leaflet. It is very suggestive of peritoneal tuberculosis while peritoneal carcinomatosis is usually caracterized by irregular thickening or nodules. Also the involvement of the large omentum is very suggestive of the disease, the most frequent aspect being a trilamellar or triple-layer thichkening with a hyperechoic thick central layer. Other findings were unilamellar homogeneous and hyperechoic thickening of the fatty layer and nodular hypoechoic omental thickening that most often correspond to hypertrophic lymphoid formations.(2)

The differential diagnosis with advanced peritoneal/ovarian neoplasms is difficult and frequently involves a disproportionate surgical invasivness but an accurate diagnosis of GTB/PTB is possible without surgery by considering the latest implementation of molecular tests. Multi-gene PCR techniques allow the direct detection of MTB and have more sensibility in diagnosis of active or latent TB and in paucibacillary conditions than MTB culture. Multi-gene PCR also gives results faster.(3–5) Early diagnosis and antibiotic therapy can prevent unnecessary surgical intervention or delayed treatment that are associated with increased mortality and morbidity. Although the gold standard for definitive GTB/PTB diagnosis remains biopsy, we experienced a different approach that combines laboratory, radiological images and molecular tests avoiding the invasive collection of specimen by laparoscopy or laparotomy.

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Declaration of interests
The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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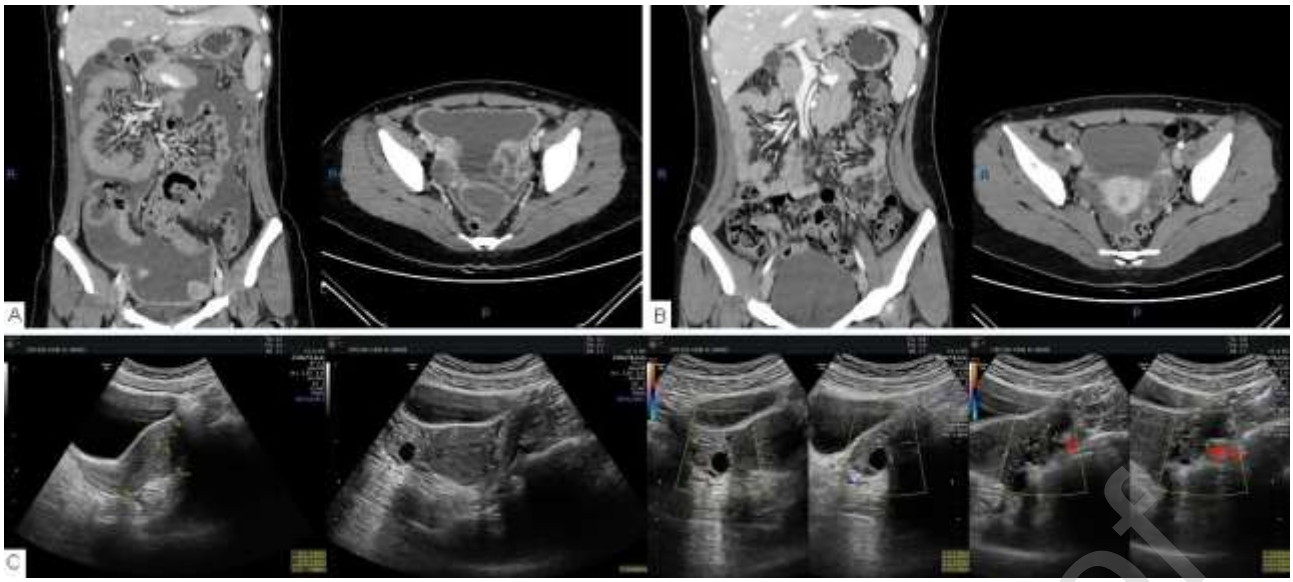

Fig. 1 (A) Contrast enhanced CT scan at diagnosis that shows ascites, peritoneal thickening and adnexal complex cystic mass. (B) Contrast enhanced CT scan after therapy that shows resolution of ascites, reduction of peritoneal thickening and of adnexal dimensions. (C) Pelvic transabdominal ultrasonography 12 months later shows normal uterus and adnexa.