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Case Report

Pelvic tuberculosis: a forgotten diagnosis – case report

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ABSTRACT

We present a case of a 14-year-old girl, Bacillus Calmette-Guérin (BCG) vaccinated, who presented with vague symptoms of abdominal pain, weight loss, and fatigue. Imaging studies revealed a pelvic mass, later found to be pelvic tuberculosis, a rare diagnosis to consider at this age. The diagnostic approach was difficult, since all investigations pointed strongly to a malignancy, from clinical, imaging (ultrasound and magnetic resonance), laboratory (elevated CA-125), and even macroscopic findings at laparotomy. Histopathology was the first hint (noncaseous granulomata), but the ultimate documentation of *Mycobacterium tuberculosis* relied on a persistent clinical suspicion, despite contradicting results. Surgical approach could have been mutilating, with irreversible consequences, considering it was a girl with a long reproductive life ahead. Tuberculosis is still a great masquerade, especially the extrapulmonary forms, and although infrequently seen at this age, it should thus be considered in the differential diagnosis of complex pelvic masses in order to avoid surgical iatrogeny/morbidity.

Introduction

Tuberculosis (TB) may be considered in 2 forms: pulmonary and extrapulmonary (kidneys, bone, central nervous system, gastrointestinal tract, female genital tract, peritoneum, etc). Extrapulmonary TB accounts for 15%-20% of all cases of TB, but among them, female pelvic TB is rare (about 5%). In children and adolescents, extrapulmonary forms are rarely reported in the pelvis, most reports being localized to lymph nodes, bone, and peritoneum [1,2]. Due to its insidious nature and nonspecific signs and symptoms, radiological investigation plays a crucial role in the early and correct identification of the disease. However, owing to its rarity and the fact that it is restricted to some epidemiologic contexts, imaging findings are easily misdiagnosed as advanced ovarian malignancy or pelvic inflammatory disease [3]. With this case report [4], we aim at promoting recognition and understanding of the imaging findings spectra associated with female pelvic TB and em-

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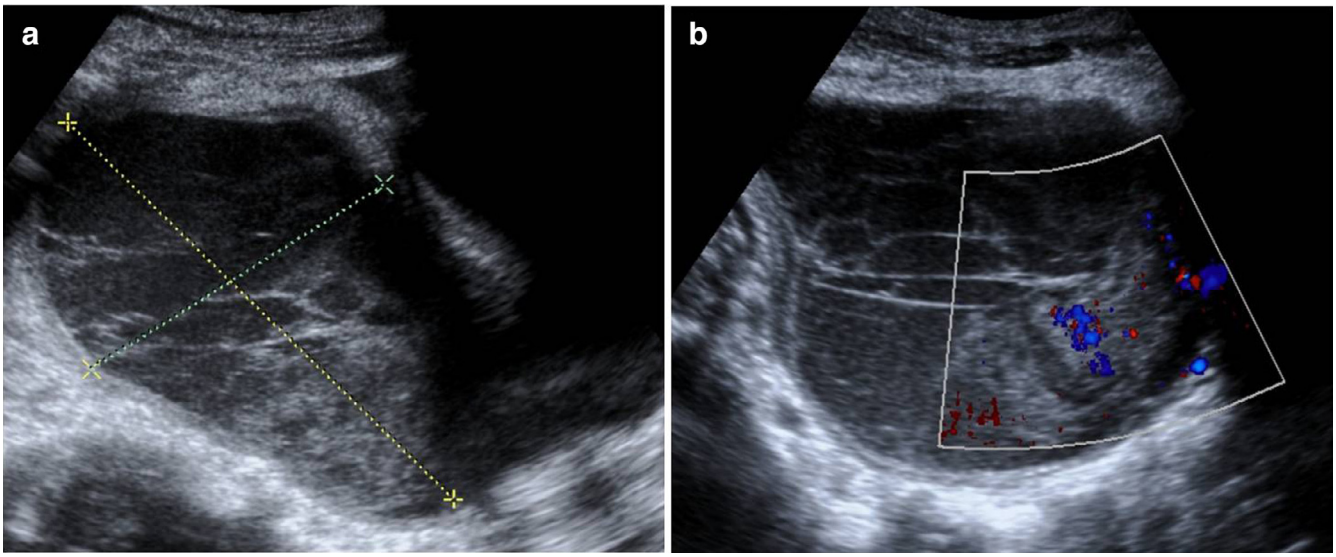

Fig. 1 – Ultrasound of the pelvis showing a complex lesion, predominantly cystic, centered in the right adnexal area (a). It appears to be encapsulated with defined margins. There are multiple thin septa and an apparent solid component in a gravity-dependent location, which exhibited some vascularity in Color Doppler study (b).

phasize the need for integration with clinical and laboratory data that are crucial to avoid misdiagnosis, delay of treatment (allowing disease progression), and surgical exploration.

Case report

An African14-year-old girl was admitted to the pediatric disease department for investigation of an adnexal mass.

Five months before admission, she immigrated to Portugal from Angola. One month after being in Portugal, she started feeling fatigue, loss of appetite, daily somnolence, and a persistent dry cough. She was medicated with an antihistaminic with some improvement of the cough. As the symptoms persisted, she had some laboratory tests, which showed microcytic hypochromic anemia that was medicated with iron replacement therapy. Two months later, she went to the emergency department due to aggravating symptoms, fever (of irregular pattern), weight loss (4 kg in 1 month), a low abdominal pain, and pain with inspiration in the right hemithorax. There was no associated past medical or surgical history and no history of recent disease in her family circle. She had no other signs or symptoms, namely, no menstrual disturbances (menarcha at 10 years), no urinary, respiratory (the cough subsided), or gastrointestinal symptoms. On physical examination, a palpable painful hypogastric mass was found, hard on palpation and of irregular contours. A BCG vaccination scar was visible.

She had an ultrasound (Fig. 1) that showed a large pelvic mass (about 12×8 cm), centered in the right adnexal area, predominantly cystic, complex, encapsulated, with multiple thin septa and a solid component that exhibited some vascularity in the Color Doppler study (Fig. 1b), creating a mass effect on the uterus and bladder. The left ovary was heterogeneous and mildly enlarged (not shown). There were associated terminal ileum, peritoneal thickening (Fig. 2), and mild ascitis. Pelvic magnetic resonance (MR; Fig. 3) documented a complex cystic mass, apparently having its epicenter on the right adnexal area, with high signal in T2W sequences and intermediate-to-low signal in T1W sequence, with no saturation on fat-suppressed sequences. The multiple septa were thin, irregular, and had no definite enhancement on post gadolinium sequences. A solid enhancing component was not confirmed. Upon scrolling the sagittal images, the lesion suggested to be contiguous with the uterine horn and terminating at the right ovary, hence a hydropyosalpingitis was neither confirmed nor excluded. There was some distortion of ileal loops that were hard to characterize as they were retracted and adherent close together and in apposition with the mass. Despite this, the lesion seemed to be encapsulated and well defined. Some peritoneal enhancement was noted. No adenopathies were visible in the pelvis or in the lomboaortic chains. Chest radiograph (Fig. 4a) revealed an obliteration of the right costophrenic angle extending upwards along the lateral wall, suggesting a loculated effusion. The corresponding chest ultrasound (Fig. 4b and c) exhibited a pleural effusionat the right lung base, anechogenic, with some thin septa, extending superiorly to the middle lung and causing passive atelectasis of the adjacent lung parenchyma.

Laboratory investigations elicited a normal leucogram and C-reactive protein (CRP), persistence of a microcytic hypochromic anemia (9.1 g/dL) and an elevated CA-125 (576 U/mL, normal values <35 U/mL).

As an ovarian malignant tumor was suspected, she was submitted to an exploratory laparotomy with the intent of an eventual resection. A large right adnexal whitish mass was found, occupying the small pelvis, with an uninterrupted capsule, from which adhesions emanated to the bladder and ileon bowel walls, preventing it from resection. There was extensive perilesional inflammatory reaction, adherent to the peritoneal fat and lateral wall of the pelvic region, and multiple lesions