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Pelvic Tuberculosis Simulating an Ovarian Tumor at a Stage of Peritoneal Carcinosis

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Abstract

Tuberculosis is a global public health problem with 10 million people developing an active form each year. The exact incidence of the pelvic form of tuberculosis is not known due to under-reporting of asymptomatic cases, vague symptomatology and lack of reliable diagnosis. We report a case of ovarian tuberculosis mimicking cancer and peritoneal carcinosis. The case involved a 15-year-old girl, hospitalized for severe pelvic pain and secondary amenorrhea. The examination showed an altered general state, a fever, a sensitive distended abdomen. The biology showed an elevation of Ca125 to 357 IU/ml. The CT scan showed a latero-uterine mass taking contrast in a heterogeneous way with an irregular and nodular thickening of the peritoneum making evoke a peritoneal carcinosis. Exploratory laparotomy found a bilateral ovarian mass with ileo-ileal, ileo-parietal and ileo-ovarian adhesions. Biopsy of the mass and the peritoneum showed a caseo-follicular gigantocellular epitheloid granulomatosis.

Keywords

Tuberculosis, Granulomatosis, Carcinosis, Ca125

1. Introduction

Tuberculosis (TB) remains a major public health problem worldwide with 10 million people developing active TB each year and 1.33 million deaths [1]. Most (85%) TB deaths occur in developing countries, particularly in Asia (55%) and Africa (30%), with most (75%) cases in the 15 - 45 age group [1]. It is caused by

Mycobacterium tuberculosis, a bacterium with a strong pulmonary tropism. However, 14% of reported cases of TB worldwide are extra-pulmonary [2]. The exact incidence of pelvic tuberculosis is not known due to under-reporting of asymptomatic cases, vague symptomatology and lack of reliable diagnostics [3]. Pelvic tuberculosis currently accounts for 6% - 10% and is mainly of interest in the fallopian tubes, cervical and endometrial regions [4]. Ovarian involvement is less frequent and its clinical, radiological and biological presentation often leads to suspicion of an ovarian tumour. We report a case of ovarian tuberculosis mimicking ovarian cancer with elevated CA-125.

2. Observation

This is a 15-year-old girl who was admitted for secondary amenorrhea for 3 months associated with fever and intense pelvic pain of progressive aggravation. She had good psychomotor development and good somatic growth. There was no tuberculosis infection or consumption of unpasteurised milk. The physical examination revealed a weight of 43 kg, a height of 155 cm (−1 DS; median), a BMI of 17 (−1; median), a fever of 38.2˚C, a tachycardia of 143 bpm, a tender distended abdomen with a firm rounded hypogastric mass of about 4 cm. The superficial lymph nodes were free. Respiration was eupneic and the lung was free. The tuberculin skin test (TST) done after a suspicion of tuberculosis was strongly positive with a diameter of 23 mm (**Figure 1**).

The blood count showed a hyperleukocytosis of 14.690 × 10^9/L with a lymphocytic predominance, an anaemia of 8.3 g/L with microcytic hypochromia and thrombocytosis of 550,000 (**Table 1**).

CRP was positive at 48 mg/l. Ca125 was elevated to 357 IU/ml, beta-HCG was normal at 0.15. GenXpert on ascites fluid was negative.

Abdominopelvic ultrasound showed a large right latero-uterine mass associated

Figure 1. Positive tRDI with a diameter of 23 mm.

Table 1. Complete blood count.

White blood cells	Lymphocytes	Neutrophils	Platelets	Hemoglobin	VGM	TCMH	CCMH
14690/l	8160/l	4531/l	550000/l	8.3 g/dl	75 fl	22 pg	28 g/dl

with a large abdominopelvic effusion. Abdominopelvic CT scan showed two tissue masses developed in the ovaries with estimated measurements of 38 × 51 mm in axial section with a height of 44 mm on the right and 35 × 65 mm in axial section with a height of 42 mm on the left. Both masses were heterogeneously contrasted after injection of contrast medium. There was irregular and nodular thickening of the peritoneum in places (Figure 2).

The diagnosis of a bilateral ovarian tumour complicated by peritoneal carcinosis was suggested.

Exploratory laparotomy found a bilateral ovarian mass with ileo-ileal, ileo-parietal and ileo-ovarian adhesions.

Biopsy of the mass and peritoneum showed a caseo-follicular gigantocellular epitheloid granulomatosis (Figure 3).

Chest X-ray came back normal (Figure 4).

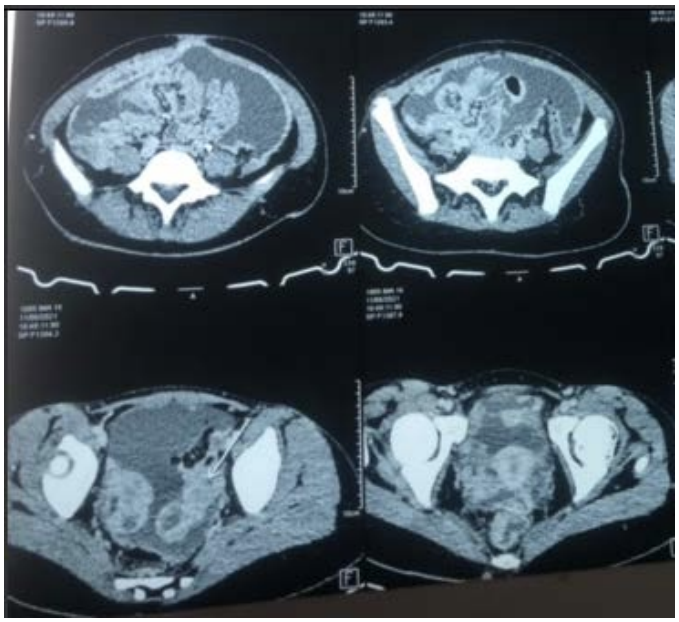

Figure 2. Abdominal-pelvic CT scan showing 2 latero-uterine masses with heterogeneous contrast.

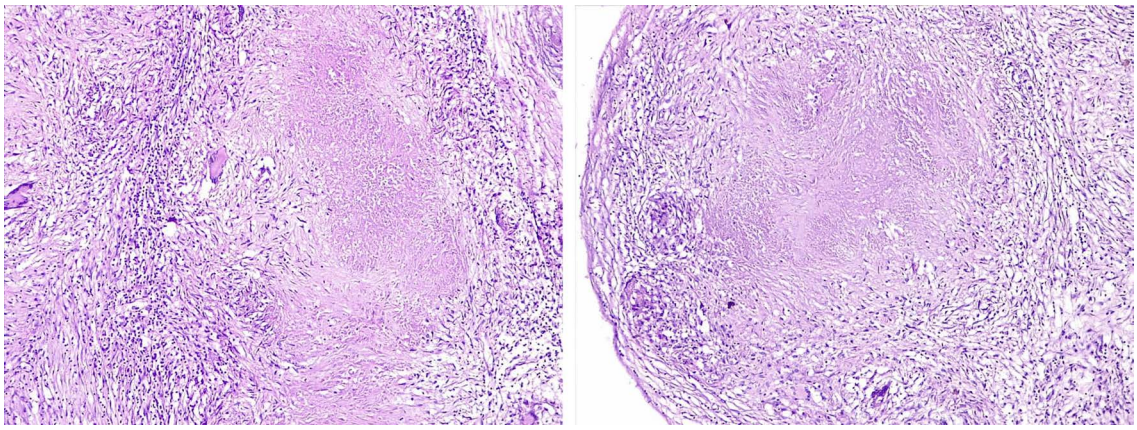

Figure 3. Epithelioid gigantocellular caseous granuloma.

Figure 4. Normal chest X-ray.

The GenXpert gastric tube test was negative. In the search for immunosuppression, retroviral serology was negative. The evolution under RHZE was marked by a regression of pelvic pain, an amendment of the fever and a normalization of Ca125 after one month of antituberculosis treatment. The patient is still on anti-tuberculosis drugs and is followed up in our department.

3. Discussion

According to WHO, nearly one million children under the age of 15 years contract tuberculosis each year. Children generally account for about 10% - 11% of all TB cases [5]. Worldwide, 14% of reported TB cases are extra-pulmonary [6] [7]. Pelvic location accounts for 6% - 10% of extra-pulmonary forms [4] [8]. However, the tumour form of genital tuberculosis accounts for 15% of all pelvic tuberculosis cases. It can occur at any age, with a predilection for young women aged 20 - 30 years [9]. However, a relatively younger age was found in our patient. The signs are non-specific and may simulate ovarian cancer [10]. Indeed, the mode of revelation in our patient was pelvic pain associated with secondary amenorrhea. These signs associated with an elevation of Ca125, made us think first of an ovarian tumour, hence the exploration in this sense in our patient. Radiologically, the signs of ovarian tuberculosis are non-specific [11]. The CT scan in our patient showed a heterogeneously contrasting latero-uterine mass with irregular and nodular thickening of the peritoneum, suggesting peritoneal carcinosis. This radiological similarity with ovarian cancer was found by Theodore A *et al.* [12]. The diagnosis was delayed in our patient by these radiological signs associated with elevated Ca125. Ca125 is a marker that is elevated in over 80% of ovarian cancers [4]. However, it can be elevated in certain chronic inflammatory conditions such as tuberculosis [13].

Exploratory laparotomy is often necessary and this allows the diagnosis to be rectified in 97% of cases [4]. In our patient, the laparotomy performed allowed a biopsy to be performed, which revealed epithelial gigantocellular caseous follicular granulomatosis specific for Koch's bacillus.

Abdominal-pelvic tuberculosis usually results from reactivation of latent disease in the peritoneum or from haematogenous spread from the primary infection in the lungs [14]. However, the primary pulmonary focus is only found in 30% - 50% of cases [9]. In our patient, no other sites were found. The treatment of pelvic tuberculosis is medical and is based on anti-bacillary drugs. Surgery can be performed for any compressive or futilised mass. Our patient had progressed well under medical treatment with regression of signs and normalization of Ca125. However, the patient is still followed up for monitoring and management of long-term complications including hypofertility. Indeed, pelvic tuberculosis is responsible for tubo-ovarian infertility in over 39% of cases [9].

4. Conclusion

Tuberculosis is a global public health problem. Pelvic localisation is rare and is manifested by non-specific signs that may point to ovarian cancer. However, it should be considered in young girls of childbearing age in TB-endemic countries.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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