Case Report

Rare radiological features of abdominopelvic tuberculosis: A case report

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ABSTRACT

The prevalence of tuberculosis is rising. The patient we were introduced to was a 26-year-old woman with no history of medical diseases, except for abdominal pain and vaginal bleeding. During the evaluation, we found high serum levels of cancer antigen-125 and radiological features in the abdominal computed tomography scan, which was more indicative of ovarian cancer. The patient underwent a surgery with the presumptive diagnosis of ovarian cancer. After the surgery, histopathology and acid fast on biopsy specimens revealed diagnosis of ovarian tuberculosis.

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Introduction

Tuberculosis remains a major problem in healthcare systems. About 9 million new patients and 3 million deaths were reported in 2013 worldwide [1]. Tuberculosis is prevalent in the pulmonary form; extrapulmonary tuberculosis is less prevalent but more challenging. Abdominopelvic tuberculosis is a highly debated issue due to its tentative diagnosis, the nonspecificity of symptoms, and radiological findings that are similar to other gastrointestinal and gynecological diseases [2]. We will report the clinical and radiological aspects of a female with ovarian tuberculosis who has been referred to our center with symptoms that have been implicated in ovarian cancer.

Case presentation

A 26-year-old woman, para 1 lived 1, was referred to our medical center with abdominal pain and vaginal bleeding. The patient noted that for the last 3 months she had been gradually experiencing intermittent vaginal bleeding, as well as progressive hypogastric and bilateral lower quadrants abdominal pain. The abdominal pain did not spread to any other spots and did not get relieved or aggravated by any factors. The patient noted that she had no history of any specific diseases. Furthermore, her menstrual cycles had always been regular and previous pregnancy was uncomplicated. The patient also complained of weakness and 5 kg of weight loss (67–62 kg) in the past 3 months. The patient did not report the symptoms of

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urinary tract infection, coughing and sputum, diarrhea, constipation, vomiting, recent travel, and history of any malignancies in her family. Upon examination, the blood pressure was 115/85 mmHg, temperature was 37.8 °C, pulse rate was 88 bpm, and respiratory rate was 16 breaths per minute. There was a mild tenderness in both the lower quadrants without rebound tenderness. Her abdomen was mildly distended but the shifting dullness examination was negative and there were firm, mobile, and ill-defined edge masses in both lower quadrants. Abdominopelvic ultrasonography showed multicystic adnexal masses; because of the adhesions in the peritoneal cavity, it was impossible to identify peritoneal fluid collection from the cystic enlargement of the ovaries. For further evaluation, the abdominopelvic computed tomography scan was done which demonstrated a multicystic adnexal mass of 2.6 × 2.3 cm with an inaccurate site of origin and diffused nodular peritoneal and omental thickening (Figs. 1 and 2). The patient's level of cancer antigen (CA), at 125, was more than the normal range (145 U/mL), but the alpha-fetoprotein and beta human chorionic gonadotrophin levels were normal. Her chest X-ray was also normal. Laboratory investigations revealed a microcytic anemia, normal leukocyte count and increased erythrocyte sedimentation rate (80 mm/hr). Laparotomy was performed on the patient due to the mass observed in the ovary and increased serum levels of CA-125 with the presumptive diagnosis of ovarian cancer. Lots of adhesions and ovaries covered with granulomatosis lesions were observed. Total abdominal hysterectomy, bilateral salpingo-oophorectomy, appendectomy, and omentectomy were conducted and biopsies from the omentum and peritoneum were taken. Surgery was performed without any complications and no complications occurred postoperatively. Histopathology revealed that fragments of fibroconnective tissue contain numerous well-formed granulomas with extensive caseous necrosis, which was highly indicative of tuberculosis. After that, the result of acid-fast stains confirmed tuberculosis. After the diagnosis of tuberculosis, she underwent antituberculosis treatment.

Discussion

The worldwide prevalence of tuberculosis, mortality rates, and its complications are increasing. Extrapulmonary tuberculosis includes about 15%-20% of all cases of tuberculosis, and abdominopelvic tuberculosis is the sixth most common form [3]. The most common spots of pelvic tuberculosis are the fallopian tubes, the cervix, the endometrium, and the ovaries, respectively [4]. This type of tuberculosis usually originates from pulmonary tuberculosis. But usually in these patients, pulmonary tuberculosis has been completely cured; so, it is
not detected in the chest X-ray. Pelvic tuberculosis is usually present with symptoms such as menstrual irregularity, pelvic pain, and infertility, and just as in the case of our patient, the most common age range for the disease is ages 20–40 [5]. Our patient was a 26-year-old woman who suffered from menstrual disorders and abdominal pain for 3 months. In the evaluations, abdominal pain was in the left lower quadrant; radiological findings revealed the mass in the left lower quadrant, and the serum level of CA-125 was more than the upper normal limit. Other patient findings were normal. The patient, with suspicion of ovarian cancer, was surgically treated, but after the surgery, pathological study and acid-fast stain showed that the patient had tuberculosis. It has been shown that CA-125 is found in more than 80% of women with ovarian cancer, but the increase in serum levels of CA-125 is not specific to ovarian cancer and it is also seen in adhesion and inflammation of the peritonei [6,7]. Barutcu et al. also presented 2 cases similar to our patient, with the difference that their patients had pulmonary involvement. Their patients underwent surgery with the probable diagnosis of ovarian cancer according to radiological findings of the abdomen and its CA-125 serum level [7]. In another study, Yebouet et al. presented the case of a 15-year-old girl which was similar to our patient; the difference was that, in their case, the girl had a single kidney and the diagnosis and management were more difficult because of the possibility of kidney cancer [4]. Lantheaume et al. also revealed that ovarian tuberculosis can mimic the radiological, clinical, and laboratory features of ovarian cancer [8]. So, in young women with radiological findings of ovarian cancer, even with an elevated serum level of CA-125, tuberculosis should be considered.

REFERENCES