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Case Report / *Olgu Sunumu*

Extrapulmonary tuberculosis mimicking gynecological malignancies

Jinekolojik maligniteleri taklit eden ekstrapulmoner tüberküloz

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ABSTRACT

Tuberculosis is a widespread public health problem, which is mostly caused by Mycobacterium tuberculosis. Typical clinical presentation is pulmonary tuberculosis. On the other hand, extrapulmonary tuberculosis is not uncommon, also challenging the clinicians for diagnosis. In this article, we present a young female patient who was ultimately diagnosed with tuberculosis, which we had difficulty diagnosing at the postnatal period, that mimicked hepatic or gynecological malignancies.

Keywords: Difficulty in diagnosis, extrapulmonary tuberculosis, gynaecological malignancies.

ÖZ

Tüberküloz, çoğunlukla Mycobacterium tuberculosis'in neden olduğu geniş çaplı bir kamu sağlığı sorunudur. Tipik klinik görünüm pulmoner tüberkülozdur. Diğer yandan, ekstrapulmoner tüberküloz nadir değildir ve tanıda klinisyenleri ayrıca zorlar. Bu yazıda, doğum sonrası dönemde tanı koymakta zorlandığımız ve nihayetinde hepatik veya jinekolojik maligniteleri taklit eden tüberküloz tanısı koyulan genç bir kadın hasta sunuldu.

Anahtar sözcükler: Tanıda zorluk, ekstrapulmoner tüberküloz, jinekolojik maligniteler.

Tuberculosis is still a widespread public health problem. Although it is commonly seen in developing countries, tuberculosis is an important part of our differential diagnosis, probably due to major migrations and pathologies that cause significant immunosuppression.[1-5] The most common clinical finding of tuberculosis is pulmonary tuberculosis characterized by fever, hemoptysis, abnormal weight loss, night sweats, fatigue, and cough. Both pulmonary and extrapulmonary tuberculosis can mimic malignancies, chronic inflammatory diseases, or fungal/viral or parasitic infections.

Abdominal tuberculosis is an uncommon form of extrapulmonary tuberculosis. It is mostly characterized by defined previous history or signs of previous pulmonary tuberculosis, fever, nonspesific abdominal pain, radiologically defined granulomas, or ascites mimicking malignancies. Despite the development of diagnostic methods, the diagnosis of tuberculosis is still challenging in connection with the loss of clinical suspicion. Extrapulmonary tuberculosis should be considered in the differential diagnosis in conditions that do not respond to medical treatment, in previous history or clinical/radiological suspicion of tuberculosis,

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or in conditions of severe immunosuppression (such as acquired immune deficiency syndrome, malignancies, bone marrow disorders, chemotherapies, long-term supraphysiological doses of steroids, monoclonal antibodies, or tumor necrosis factor-alpha etc.).

CASE REPORT

An 18-year-old female patient admitted to the internal medicine clinic due to unexplained fever and abdominal pain for 12 weeks. She also reported abdominal distension after three weeks of diarrhea. The patient did not report any nausea, vomiting, cough, dizziness, vaginal, discomfort or discharge. It was learned that the patient gave birth with normal spontaneous vaginal delivery 12 weeks ago and there were no complications during the delivery or postnatal follow-up. On physical examination, she was pale. Vital findings were as follows: blood pressure 90/60 mmHg, pulse: 105/minute, fever: 39°C. There was no sign of acute abdomen other than distension and tenderness on the abdomen examination. Her rectal examination was normal. Her respiratory and cardiovascular system examinations were normal. She had no lymphadenopathy or any mass. Laboratory findings were given in Table 1. Hepatitis B surface antigen, hepatitis B surface antibody, hepatitis C antibody, and human immunodeficiency virus antibody serologies were all negative. Anti-nuclear antibody was found to be 1/80 positive with granular pattern. The purified protein derivative (PPD) was 24 mm.

Paracentesis was performed for both therapeutic and diagnostic purposes. Biochemical

Table 1. Laboratory findings

	Result	Reference range
Glucose (mg/dL)	76	74-106
Creatinine (mg/dL)	0.7	0.6-1.1
Aspartate transaminase (U/L)	76	0-35
Alanine transaminase (U/L)	42	0-35
Alkaline phosphatase (U/L)	121	30-120
Gamma-glutamyl transferase (U/L)	38	0-38
Lactate dehydrogenase (U/L)	753	0-247
Total bilirubin (mg/dL)	0.8	0.3-1.2
Direct bilirubin (mg/dL)	0.1	0-0.2
Protein (g/dL)	6	6.6-8.3
Albumin (g/dL)	2.6	3.5-5.2
Serum cancer antigen 125 (U/mL)	1620	0-35
Erythrocyte sedimentation rate (mm/h)	98	0-20
C-reactive protein (mg/dL)	16.4	0-0.8
White blood cell count 10^3/uL	9000	4200-10600
Neutrophil (%)	95.6	37-80
Lymphocyte (%)	2.6	10-50
Hemoglobin (g/dL)	8.7	12.2-16.2
Platelets (10^3/uL)	534000	14000-400000

Table 2. Laboratory findings of ascites compared with serum

	Serum	Ascites
Glucose (mg/dL)	76	36
Lactate dehydrogenase (U/L)	753	1156
Albumin (g/dL)	2.6	2.3
Total protein (g/dL)	6	4.7

Table 3. Laboratory findings at the first visit and after six months of treatment

	Initial result	Control	Reference
White blood cell count (10^3/uL)	3100	5400	4200-10600
Neutrophil (%)	74.6	83.9	37-80
Erithyrocyte sedimentation rate (mm/h)	98	59	0-20
C-reactive protein (mg/dL)	16.4	5.95	0-0.8
Albumin (g/dL)	2.6	3.1	3.5-5

properties of ascites fluid were given in Table 2. Serum-ascites albumin gradient was calculated to be 0.3 and considered to be compatible with exudate. Adenosine deaminase (ADA) level of ascitic fluid was found to be 52 mg/dL. Her posteroanterior chest X-ray and thorax computed tomography (CT) revealed no signs of pneumonia or previous tuberculosis. There was no evidence of any malignancy on abdominal CT or magnetic resonance imaging scans. In abdominal imaging, liver parenchyma was homogeneous and compatible with mild hepatomegaly. The patient had fever five times during clinical follow-up. All blood and urine samples collected during the febrile period were sterile. Colonoscopy was performed for the cause of diarrhea and fever. Colonoscopic imaging showed chronic inflammation that may be consistent with Crohn's disease, ileitis due to tuberculosis, or malignancy due to chronic inflammation in the terminal ileum. The biopsies were taken from inflammatory areas of ileum. First, the fever in the patient was thought to be associated with abdominal tuberculosis or malignancy. Due to the patient's high ADA level, pregnancy history, positive PPD reaction and young age, therapy was started in the form of four antituberculosis drugs as isoniazid, rifampicin, pyrazinamide, and streptomycin. Histopathological examination of ileal biopsies revealed acid-fast bacilli and caseous granulomas. After two weeks of treatment, the patient became afebrile and the abdominal pain and distention decreased. The patient underwent a control colonoscopy to evaluate the clinical response, which showed that the inflammation of the ileum significantly decreased and granulomas and acid-fast bacilli disappeared. The patient was discharged. After six months of treatment, her symptoms improved completely. The laboratory findings in the first visit and after six months of treatment were given in Table 3. Also, the patient's liver dimensions returned to normal. A written informed consent was obtained from the patient.

DISCUSSION

Tuberculosis is a public health problem that still has significant morbidity and mortality rates that should be included in our differential diagnoses at the internal medicine clinics. Because signs, symptoms, and laboratory abnormalities are not very specific or diagnostic, diagnosis can be very challenging. On the other hand, when diagnosed immediately and treated effectively, peritoneal tuberculosis has excellent prognosis compared to other peritoneal pathologies.[6] Symptoms and laboratory abnormalities usually include abdominal colicky pain, diarrhea, weight loss, loss of appetite, fever, constipation, hemorrhage, intermittent bowel obstruction, anemia, leukocytosis, hypoalbuminemia, hypercalcemia, and elevated erythrocyte sedimentation rate (ESR). The gold standard for diagnosis is histopathological examination of colonoscopic or laparoscopic biopsies revealing acid-fast bacilli and caseous granulomas. Histopathological findings can also exhibit mucosal ulcerations, nodules, edematous mucosal folds, pseudopolyps, luminal narrowing, caseous necrosis, and granulomas. Because granulomas are frequently located in the submucosal layer, biopsies should be taken from the edges of ulcers. Computed tomography scanning is the most reliable imaging technique, although there is no pathognomonic radiologic finding that facilitates the diagnosis. While tuberculosis is still a common problem in the immigrant population, peritoneal tuberculosis is the most common form of extrapulmonary tuberculosis.[7] It has been reported that peritoneal tuberculosis may be present with ascites, omental cake, bilateral enlarged ovaries, and elevated serum cancer antigen 125 (CA-125) levels, and serum

CA-125 levels may be useful in monitoring the response to treatment.[7] Abdominopelvic tuberculosis treatment is based on medical treatment. Abdominopelvic tuberculosis is often misdiagnosed as advanced ovarian cancer and may subsequently be exposed to unnecessary operative risk.[8]

Our case presented with fever of unknown origin, ascites, leukocytosis, and high ESR. The absence of a family history of tuberculosis and absence of a history of exposure to Mycobacterium tuberculosis complicated the diagnosis. On the other hand, pregnancy-induced immunosuppression, elevated ascites ADA levels, histopathological findings of colonoscopic biopsy, and dramatic clinical response to antituberculosis therapy have made tuberculosis the most likely diagnosis. Tuberculosis should not be overlooked as an insidiously expanding public health problem and should be included in our differential diagnoses.

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