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Abdominal tuberculosis: a case report

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Introduction

Tuberculosis is a major public health problem in developing countries. Before the era of effective treatment, gastrointestinal involvement secondary to pulmonary tuberculosis had been reported in high percentage (55-90%). Abdominal tuberculosis is still frequent among immigrants and AIDS patients in the developed countries (1,2). In this case report, an interesting abdominal tuberculosis case with multiple gastrointestinal organ involvement is presented.

Case report

A 64 -year-old man applied to our Gastroenterology Department because of abdominal pain and swelling, intermittent fewer, weakness, weight loss and anorexia. His complaints were present for a month before his admission to the hospital. He was malnourished and pale. Physical examination revealed ascites and pleural effusion in the right lower lung lobe. No organomegaly and lymphadenopathy were present. Laboratory investigation revealed elevated erythrocyte sedimentation rate (40 mm/h), mild anaemia (Hct:30%, Hb:10.3gr/dl), hypoalbuminemia (2.6 gr/dl), hyperglobulinemia (3.7 gr/dl) with elevated gamma globulinemia (26%) in the protein electrophoresis. All other routine biochemical tests, alpha-feto protein and carcinoembryonic antigen values were within the normal range in the serum. The sputum examination for acid-fast microorganism and PPD (2 mm) were negative. Ascitic fluid examination confirmed characteristics of exuda with a serum-ascites albumin gradient 0.4 gr/dl (<1.1 gr/dl), leucocyte count of 1000/ml and high per centage of lymphocytes (92%). No acid-fast microorganism was found in the direct staining and specific culture of the ascitic fluid. In the chest radiography, pleural effusion in the right lower zone and right hilar lymphadenopathy with fibrotic bands suggested tuberculous infection. The pleural fluid analysis also revealed characteristics of exuda like ascitic fluid consistent with tuberculosis. Abdominal ultrasonography and computed tomography (CT) disclosed a mass image at 14x9 cm dimensions in the left hepatic lobe and two nodules with a diameter of a few millimetres in the right lobe. After dynamic CT, the mass in the left lobe was attributed to the hemangioma. Upper gastrointestinal endoscopy revealed ulcerated lesions suggesting carcinoma with irregular contours and exudations at the mid-esophagus, near the hilar lymphadenopathy. Biopsy examinations showed chronic inflammation and were not confirmed as malign infiltration. Bronchoscopic examination was normal. Laparoscopic examination revealed multiple small granulomatous nodules disseminated on the parietal peritoneal surface and fibrotic adhesive bands on the visceral periton. The liver surface was granulomatous, and hemangiomatous masses were present in both hepatic lobes, remarkably in the left (Figure1,2). Histopathologic examinations of multiple liver and peritoneal biopsy specimens were consistent with tuberculosis (Granulomatous infiltration and caseification necrosis). The hemangiomatous mass was punctioned, and the examination of aspirated bloody fluid did not reveal tuberculosis or malignancy.

Figure 1. Multiple small nodules like "millet seed" disseminated on the peritoneal and liver surfaces at laparoscopy.

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Figure 2. Granulomatous appearence of the liver surfaces and the hemangiomatous mass in the left liver lobe at laparoscopy.

Esophageal endoscopy repeated after four weeks of antituberculous treatment (INH, Rifampicin and Ethambutol) revealed that previous ulcerated lesions were almost healed. This surprising result suggested esophageal tuberculosis, secondary to pulmonary and lymphadenitis tuberculosis. After two months of the treatment, the patient looked very well. His symptoms together with ascites and pleural effusion completely disappeared. He was very healthy in a period of one year during the medical treatment and at three monthly examinations after the discharge from the hospital.

Discussion

Nowadays, Tuberculosis infection is still a common public health problem in the developing countries like Turkey, especially in the East and South-East Anatolia regions. Tuberculosis can involve any part of the gastrointestinal tract. The major pathogen is Mycobacterium tuberculosis but from some parts of the world cases caused by M.bovis, an organism found in dairy products, are still reported (2). .Abdominal tuberculosis has a frequency related to the severity of pulmonary involvement: 1% of patients with minimal pulmonary tuberculosis had gastrointestinal infection, compared to 4.5% with moderately advanced and 25% with far advanced disease (2). The most frequent sites of involvement are caecum, ileocecal region and terminal ileum. Other parts of the gastrointestinal system are rarely exposed to tuberculous involvement. The patient of abdominal tuberculosis may be asymptomatic initially but in advanced cases abdominal pain and swelling, unexplained fever, weakness, anorexia and weight loss predominate in the clinical picture. Esophageal involvement is almost secondary to pulmonary, mediastinal lymphadenitis and miliary tuberculosis. Primary esophageal tuberculosis is extremely rare. Esophageal tuberculosis causes stricture, ulcerations, tracheal fistula and may resemble Chron's disease and cancer (3). AIDS may be associated with esophageal tuberculosis rarely (4). Peritoneal tuberculosis was observed in 58 % of abdominal tuberculosis and in 2 % of all tuberculosis cases and ascites formation was reported in two thirds of the patients (5). Laparoscopy, the essential diagnostic method, reveals multiple small nodules and fibrotic adhesive bands covering peritoneal surfaces with an appearence of "millet seed" and "violin string". Liver tuberculosis is primarily due to miliary infection with diffuse and granulomatous involvement. Tuberculosis is the most frequent and world-wide cause of granulomatous hepatitis (6). The liver may be moderately enlarged and palpable with minimal splenomegaly and lymphadenopathy. Tuberculoma (macronodular pseudotumor) and abscess formations are very rare (7). In our case, the hemangiomatous mass in the left hepatic lobe was thought to be a tuberculomatous abscess initially but microbiological results of aspirated bloody fluid were negative. We conclude that this patient was a very interesting abdominal tuberculosis case concerning multiple organ (esophagus, liver and peritoneum) involvement .

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