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CASE REPORT

A Case of Tuberculosis Mimicking Colon Cancer

Kolon Kanserini Taklit Eden Tüberküloz Olgusu

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ABSTRACT

The incidence of tuberculosis (TB) is increasing all over the world. Although pulmonary involvement is more frequent, 3% of patients present with abdominal involvement which requires differential diagnosis from malignancy. The clinical presentation of abdominal TB is abdominal pain, fever, and weight loss, and it is difficult to differentiate from Crohn's disease and malignancies. In this article, we aimed to report a patient with cecal TB which could be confused with colon tumor in clinical and imaging modalities.

Keywords: Tuberculosis, colon, cancer

ÖZ

Tüm dünyada tüberküloz (TB) insidansı giderek artmaktadır. Daha sıklıkla pulmoner tutulum izlense de hastaların %3'ü abdominal tutulum ile başvurmaktadır ve malignite ile ayırıcı tanısı yapılması gerekmektedir. Abdominal TB'de klinik prezentasyon karın ağrısı, ishal, ateş, kilo kaybı şeklinde olup Crohn hastalığı ve gastrointestinal sistem maligniteleri ile ayırıcı tanı yapmak zordur. Bu yazıda klinik ve görüntüleme yöntemlerinde kolon tümörü ile karışabilecek çekal TB hastasını bildirmeyi amaçladık.

Anahtar Kelimeler: Tüberküloz, kolon, kanser

Introduction

In developed countries, the incidence of tuberculosis (TB) is rising as a result of immunosuppression induced by increasingly prevalent causes like cancer and human immunodeficiency virus infection. In developing nations, poor living conditions are the main cause of TB infection.[1]

According to a report published in 2014 by the Public Health Institution of Turkey entitled "The War on Tuberculosis in Turkey 2013", the annual incidence of TB fell from 26/100.000 in 2005 to 19.3/100.000 in 2011.[2]

TB is an infectious disease which can involve any organ or tissue, is a major cause of morbidity and mortality, and is characterized by calcified granulomas. The most common form is pulmonary TB. Abdominal TB is seen in 15-20% of all extrapulmonary TB cases and 3% of TB cases overall.[3,4]

Abdominal TB may involve the enteric, peritoneal, omental, and mesenteric lymph nodes, as well as intra-abdominal solid organs such as the liver, spleen, and pancreas.[5] The ileocecal region or jejunum are involved in approximately 75% of gastrointestinal system (GIS) TB cases.[6]

The clinical presentation of abdominal TB includes abdominal pain, diarrhea, fever, and weight loss, and can be difficult to differentially diagnose from Crohn's disease and GIS malignancies. In patients with suspicious clinical and imaging findings, biopsy and bacteriological diagnosis are very important, but unfortunately mycobacteria are difficult to culture.[7]

With this report, we aimed to present a case of cecal TB whose clinical and imaging findings could be mistaken for colon tumor.

Case Report

A 32-year-old male patient presented to our clinic for colonoscopy after undergoing tests for about 6 months at another center for malaise, chronic diarrhea, abdominal pain, and anemia. On physical examination, a palpable mass

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was detected in the right lower quadrant. Colonoscopy revealed a cecal mass invading the ileocecal valve causing circular stenosis and showing the features of a hemorrhagic, fragile malignancy. Biopsy samples were obtained during colonoscopy (Figure 1). Thoraco-abdominal computed tomography (CT) imaging with oral and intravenous contrast was conducted. CT evaluation showed nodal densities of approximately 9x8 mm and 13x12 mm suggestive of cavitary lesions in the superior segment of the lower lobe of the left lung (Figure 2). In addition, asymmetric wall thickening (maximum thickness of 17 mm) was observed in a colonic segment starting at the cecum and extending about 6 cm up the ascending colon, and multiple enlarged, likely metastatic lymph nodes (maximum size 13x12 mm) were detected in the surrounding adipose tissue (Figure 3). Although pulmonary findings initially suggested a TB-like infectious process, it could not be differentiated from atypical lymphangitis carcinoma. The ascending colon lesion was evaluated as a malignant process and associated infiltrative appearance. Biopsy results indicated ulcer with a base of granulation tissue and extensive granulomatous inflammation, and the findings were considered suggestive of TB. The patient was referred to the clinic of chest diseases for TB testing and treatment. The patient's sputum was positive for acid-fast bacilli (AFB), and treatment for active TB was initiated. Follow-up colonoscopy was recommended.

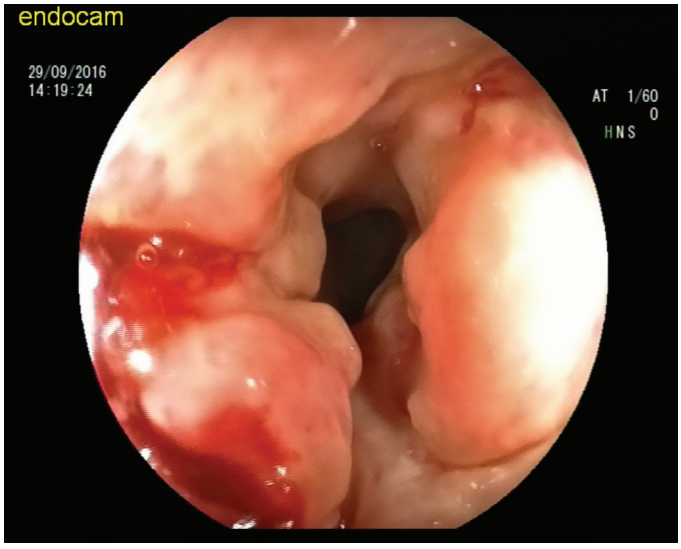

Figure 1. Colonoscopy image showing tuberculous involvement of the cecum

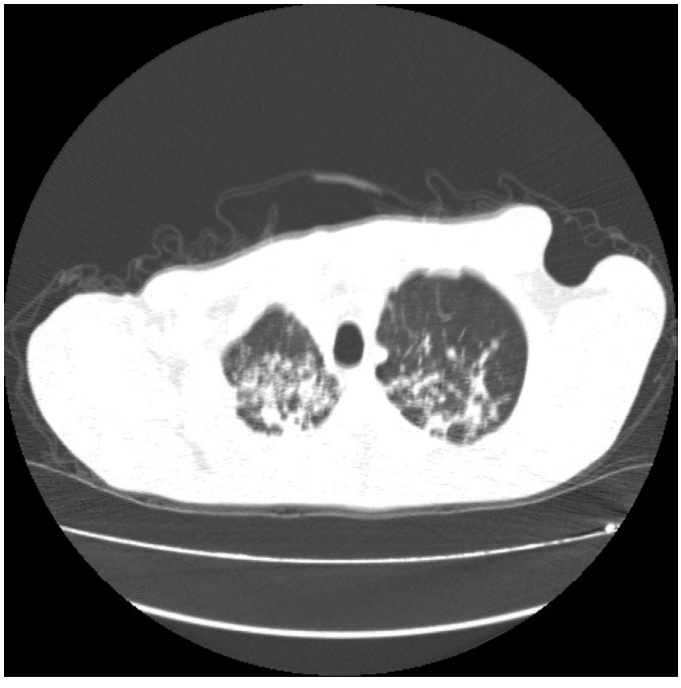

Figure 2. Thoraco-abdominal computed tomography image showing pulmonary tuberculosis

Discussion

Gastrointestinal TB, caused by *Mycobacterium tuberculosis*, can manifest anywhere in the GIS. Although seen infrequently in developed nations, it can still present an important health problem in Turkey.[1] Extrapulmonary TB, which accounts for 15-20% of all TB cases, occurs in both developed and developing countries and is growing in importance. Abdominal TB is seen in 3% of all TB cases.[3]

The symptoms of abdominal TB are not specific, but most patients present with abdominal pain, and may also have diarrhea, fever, anorexia, and weight loss. Without current or previous pulmonary disease, TB is not usually considered as an initial diagnosis.[7] Our patient also presented with complaints of malaise, anorexia, chronic diarrhea, and weight loss. In 25-50% of cases, a mass is palpable in the right lower quadrant during physical examination, as in we detected in our patient.[8]

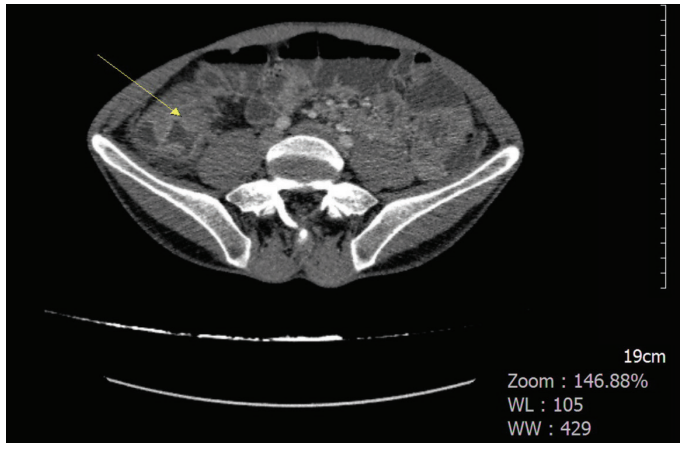

Figure 3. Thoraco-abdominal computed tomography image showing colonic tuberculosis

Gastrointestinal involvement is the sixth most common form of extrapulmonary TB. The ileocecal region, ascending colon, jejunum, appendix, duodenum, stomach, esophagus, sigmoid colon, and rectum are usually involved. Due to the multifocal nature of intestinal TB, involvement of the colon alone is extremely rare.[9]

Findings from radiologic imaging studies to identify GIS involvement are non-specific. Imaging findings which may suggest abdominal TB are narrowing or apple-core sign on barium colonography. Ascites, omental thickening, abdominal lymph nodes, and bowel wall thickening may be observed on CT. However, these findings alone are not sufficient for diagnosis and are not disease-specific signs. Colonoscopy has an important place in the diagnosis of ileocecal and colon TB. Ulceration, nodular appearance, cecal mass, and ileocecal valve deformation are the most common colonoscopy findings.[10] Similarly, colonoscopic examination of our patient revealed a cecal mass lesion extending to the ileocecal valve with a malignant appearance and circulatory involvement, which mimicked a colon tumor.

Biopsy samples obtained during colonoscopy facilitate rapid diagnosis. Specific microbiologic analysis or polymerase chain reaction analysis are necessary for a definitive diagnosis.[10,11] In our case, pathologic examination report of the biopsy samples indicated ulcer with a base of granulation tissue and extensive granulomatous inflammation. Considering the presence of pulmonary signs and AFB+ sputum, the patient's findings were evaluated as TB.

The differential diagnosis includes inflammatory bowel diseases, colon cancer, diverticulitis, appendicitis, and other causes of infectious colitis. Anti-TB drugs are used as medical treatment. Surgical intervention should also be considered in complicated cases.[3] The most common complications are intestinal obstruction, GIS fistula, perforation, and gastrointestinal hemorrhage.

In conclusion, TB infection should be considered in the differential diagnosis of patients with no history of pulmonary TB presenting with non-specific GIS symptoms. We believe that in developing countries where the frequency of TB is high, such as Turkey, intestinal TB should be suspected and advanced testing performed when granulomatous inflammation is detected in biopsy specimens obtained from GIS organs.

Ethics

Informed Consent: Retrospective study.

Peer-review: External and internal peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: H.Ç., M.D., Concept: D.A.Ç., Design: E.G., Data Collection or Processing: E.B., Analysis or Interpretation: U.A., Literature Search: D.A.Ç., E.B., Writing: H.Ç.

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