

Tuberculosis of the Small Intestine. A Rare Cause of Obstructive Ileus. Case Report

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Abstract

Gastrointestinal tuberculosis is relatively rare in developed countries and is the sixth most common extra-pulmonary location of the disease. A rare case of obstructive ileus due to small intestinal tuberculosis is presented.

A 20 years old male, presented at the Emergency Unit complaining of intense abdominal pain and bloating. At the CT scan of the patient a solid mass, was identified, at the level of ileocecal valve. The patient underwent surgery. The mass was resected along with mesenteric lymph nodes. Side to side anastomosis was chosen for reconstruction of the bowel. He made a satisfactory recovery and was discharged at the 8th postoperative day. The histological examination showed tuberculosis of the small intestine. The patient received antituberculous treatment for 7 months total.

Terminal ileum and ileocecal junction are the most common sites of involvement of intestinal tuberculosis followed by the colon and jejunum. Patients at risk are mainly immigrants and people who traveled recently to countries where tuberculosis is endemic.

Keywords: *Tuberculosis; Small Bowel; Small Intestine*

Introduction

Tuberculosis of the gastrointestinal tract is, by definition, an infection of peritoneum, abdominal organs and lymphatics with *Mycobacterium tuberculosis* [1].

Gastrointestinal tuberculosis is relatively rare in developed countries and is the sixth most common extra-pulmonary location of the disease [1]. Populations at risk are the immigrants, traveling to Europe mainly from the East, the homeless, the prisoners, and the immunosuppressed [2].

The mechanism of gastrointestinal tract involvement is either by direct exposure of the gastrointestinal tract mucosa to infected sputum after swallowing or by hematogenous spread [2,3]. Involvement of the small bowel alone is very rare, which makes it very difficult to diagnose [3].

A rare case of obstructive ileus due to small intestinal tuberculosis is presented.

Case Presentation

A 20 years old male, presented at the Emergency Unit of the "Sismanogleio" General Hospital of Athens Greece, complaining of intense abdominal pain and bloating. "Sismanogleio" hospital of Athens, Greece is a 500-bed secondary general hospital on the northern sector of the region of Athens (approximately 6.000.000 urban and suburban population).

The patient was of African race. At the clinical examination, the abdomen was distended and tendered. Intestinal sounds were absent on auscultation. The patient described a period of alternating cycles of diarrhea and constipation (approximately 1.5 months), with flatulence the days prior to admission. He also complained of nausea that began the afternoon of the previous day and two episodes of vomiting.

The patient also pointed out that during the last 30 days he had trouble sleeping due to excessive sweating overnight. He also admitted, losing about 8 kilograms the last 3 months.

The chest X-ray of the patient was normal, while the abdominal X-ray revealed see gas-fluid levels, as in obstructive ileus. The laboratory findings revealed a haemoglobin of 11.1 g/dL and a C-reactive protein (CRP) of 82 mg/L.

At the CT scan of the patient a solid mass, was identified, at the level of ileocecal valve. The mass was completely obstructing the ileum of the patient. Mesenteric lymph nodes were also visible. (Figure 1) At that point the patient underwent emergency surgery.

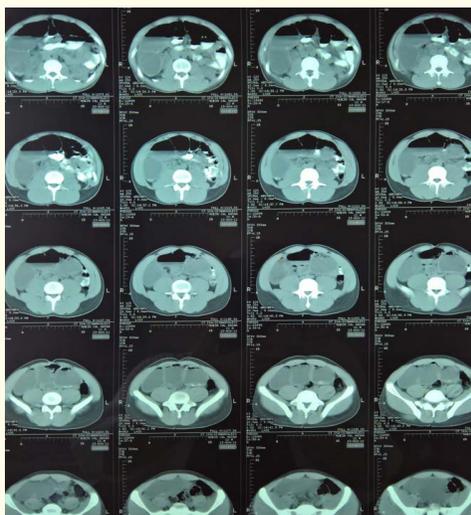


Figure 1: Pre-operative CT scan.

During the surgery, an inflammatory mass of the small intestine was recognized, located approximately 10 cm proximal to ileocecal valve. The mass was resected along with mesenteric lymph nodes. Side to side anastomosis was chosen for reconstruction of the bowel and was performed with the use of Endo-GIA (Figure 2).



Figure 2: Intraoperative picture of the surgical specimen.

The patient had a satisfactory recovery and was discharged at the 8th postoperative day.

The histologic examination of the specimen revealed tuberculosis of the small intestine (Figure 3). The patient was given antituberculous treatment per os. A four-drug anti-tuberculosis regimen (consisting of isoniazid with vitamin B6, rifampin, ethambutol, and pyrazinamide) was initiated. After 2 months, a 2 drug-specimen followed with rifampin and isoniazid for 5 months. He showed no drug-related side effects.

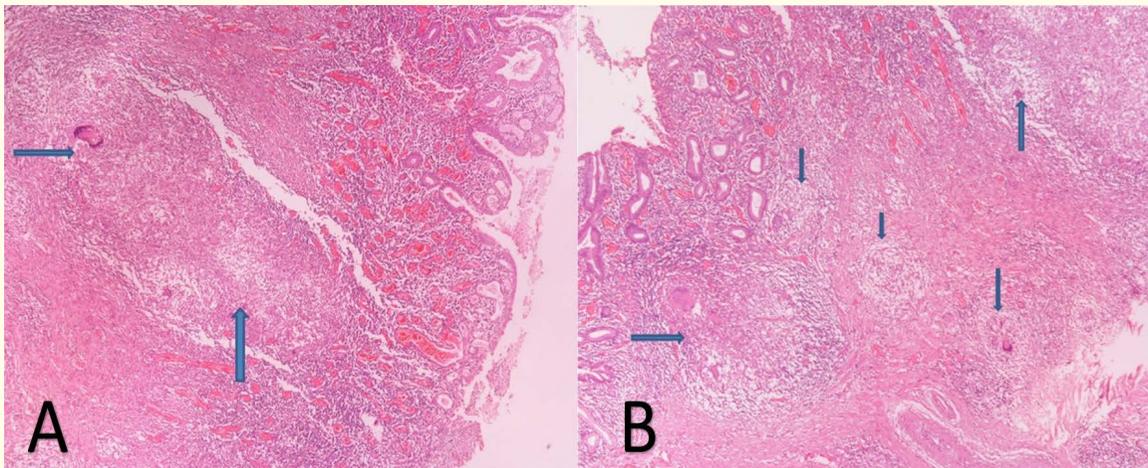


Figure 3: A. Tuberculosis with noncaseating granulomas (arrows): H-Ex40 B. Confluent tuberculosis granulomas (arrows): H-Ex40.

Discussion

Extra-pulmonary tuberculosis accounts for 10 - 12% of the total tuberculosis cases. A total of 50% of extra-pulmonary tuberculosis cases are associated with human immunodeficiency virus positivity [4]. The present patient had a negative immunodeficiency virus test.

Abdominal tuberculosis can involve the intestine, peritoneum, lymph nodes, or solid abdominal organs [5].

Approximately 50% of the patients presenting with tuberculosis of the gastrointestinal tract will have no apparent pulmonary involvement, while Mantoux test can be suggestive of tuberculosis in as low as 22% of the patient [5].

Some common clinical features are abdominal tenderness, pyrexia, ascites, diarrhea, nausea, low haemoglobin levels and a raised CRP. However, in most cases it presents an 'atypical abdominal discomfort' [5]. The clinical features of this disease are nonspecific and can be very similar to Crohn's disease. Distinguishing between these two entities is a challenge because there is marked overlap in the clinical presentation and the radiographic, laboratory, and endoscopic findings, as well as in the presence of granulomas on histologic examination [3,6-9].

Terminal ileum and ileocecal junction are the most common sites of involvement of intestinal tuberculosis followed by the colon and jejunum [5].

Patients at risk are mainly immigrants and people who traveled recently to countries where tuberculosis is endemic. Also, prisoners, homeless and immunocompromised are at increased risk [5].

Conclusions

Tuberculosis of the small intestine is an extremely rare diagnosis, especially in the developed countries and as it was presented by this case it can lead to obstructive ileus. However, due to the immigrant-waves towards Europe the last few years, the physician must keep a keen eye for such cases even at the European developed countries.

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