Ileocecal tuberculosis as a cause of weight loss (return to an old disease): a case report

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Abstract: Ileocecal tuberculosis (TB) is an uncommon disease. Diagnosis is often delayed or messed up with other disorders like Crohn's disease due to the lack of specific symptoms and laboratory findings. As a result, effective treatment is deferred with ensuing morbidity and mortality. A 53-year-old male patient was admitted to Besat hospital, Sanandaj, Iran. He suffered from mild abdominal pain, weight loss, and low-grade fever and lymphadenopathy (LAP). Antituberculosis medication during hospitalization and after discharge resulted in weight gain and lymphadenopathy improvement. In conclusion, Intestinal TB should always be kept in mind while investigating the conditions such as weight loss, abdominal pain, lymphadenopathy, perforation, obstruction or bleeding of the intestines, especially in the endemic regions. Here, we present a rare case of Ileocecal tuberculosis (TB) with weight loss.
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Key words: Intestinal Tuberculosis, Tuberculosis (TB), Abdominal computed tomography (CT), Colonoscopy, Weight loss, Intestinal obstruction.

Introduction

Being a major global health problem Tuberculosis (TB) has a high burden of disease globally(1, 2). It kills about two million people annually(3). TB can affect different organs of the body such as respiratory and gastrointestinal systems(4). Despite considerable progress made in therapy and prophylaxis during the past 25 years, intestinal tuberculosis contributes as a major health hazard. In recent years a resurgence of the disease occurred in the west, which could be due to the AIDS epidemic and increased global migration. This widespread malady with its protean profiles and varied complications continues to challenge the diagnostic and therapeutic skill of clinicians. The significance of correct diagnosis is vital, since untreated cases could face with high mortality rate(5). Tuberculosis is one of the major health problems in Iran; nevertheless the problem grows deeper due to immigrants and pilgrims from Pakistan and Afghanistan(6). Diagnosis of intestinal TB is often postponed due to the lack of specific symptoms and laboratory findings. This owes to the difficulty of identifying the mycobacterium tuberculosis in the samples taken from lower GI endoscopy (identified in less than 18% of cases), as well as the fact that diffuse tuberculosis of the colon appears very similar with Crohn's disease (7). Intestinal Tuberculosis is a rare form of tuberculosis and is found in immunosuppressed patients, usually with the clinical appearance of Crohn's disease(8). As a result, effective treatment is delayed with ensuing morbidity and mortality(9). Therefore recognizing rare cases of tuberculosis can improve clinician practice and save patients life in countries with high burden of the disease(10). For this reason colonoscopy was introduced as a primary screening tool. The purpose of this article is to report a rare case of Ileocecal tuberculosis, presenting in the form of bowel obstruction.

Case report

A 53-year-old male patient was admitted to Besat hospital in Sanandaj, Iran, he had non productive cough, shortness of breath, sweating, epigastric pain, weight loss (the patient was 45 kg), low-grade fever, nausea, and vomiting. The patient has been admitted several times with the same presenting problems in addition to chronic cough. Then pulmonary tuberculosis was investigated using appropriate investigative modalities like CT scan, sputum cytology, and bronchoscopy. Finally after colonoscopy he was admitted in the infectious disease ward with the diagnosis of Ileocecal tuberculosis. Barium follow-through procedure findings suggest a chronic inflammatory lesion, more likely TB. However, Crohne's disease is included in the differential diagnosis, requiring histopathologic evaluation. Other less likely differentials include lymphoma in the chronic clinical setting, and

Yersinia entritis in the acute setting. Abdominal CT scan findings suggest a chronic inflammatory lesion, more likely TB. (Fig 1) However, Crohne's disease is included in the differential diagnosis, needing histopathologic evaluation. Other less likely differential diagnosis include lymphoma in the chronic clinical setting.

Colonoscopic results showed ulcerative mass like lesions in ileosecal region with a high likelihood of tuberculosis. Laboratory results showed presenting feature of a severe hypochromic microcytic anemia with some target cells, anisocytosis and poikilocytosis. Chest CT, and Liver sonography results were all within the normal ranges. Bone marrow biopsy and aspiration showed slightly cellular marrow for age with mild erythroid hyperplasia. Wright, Coombs' and PPD tests were all negative. Colonoscopic results ruled out possibility of cancer. Differential diagnosis were Crohn's disease, lymphoma, colon adenocarcinoma, actinomycosis and amebiasis. Other routine laboratory workup revealed the following results:

White Blood Cell (WBC): 12000 cell µL1
Hemoglobin: 6 gr/dL1
ESR: 65 mm/h
CRP: 2+

Nevertheless after the patient was examined for the presence of acid-fast bacilli (AFB) the result was positive.(Fig.2) After starting treatment the patient had weight gain (from 45 to 56kg) and retraction of lymphoid glands.

Serum Protein Electrophoresis results were as follow:
Albumin: 73.3 G/dl
Alpha 1: 104 G/dl
Alpha 2: 9.8 G/dl
Beta: 5.3 G/dl
Gamma: 10.2 G/dl
A/G: 2075

In PBS
Anisocytosis and hypochromia were seen.
WBC morphology was unremarkable
Differential count: PMN 68%
Lymphocyte: 27%
Monocyte: 5%

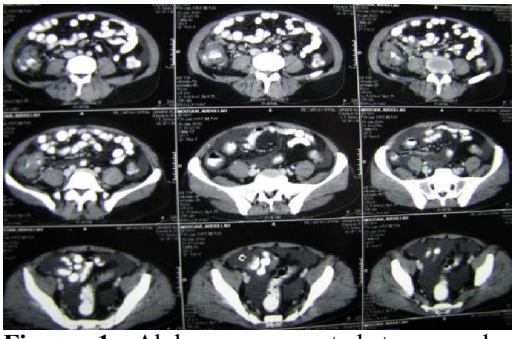

Figure 1. Abdomen computed tomography (CT) without the application of contrast revealed thickening of the of cecum and terminal ileum.

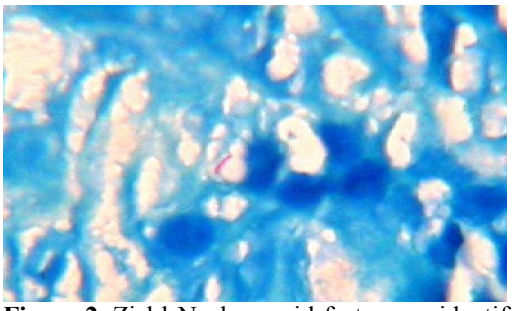

Figure 2. Ziehl-Neelsen acid-fast smear identifying TB infection

Bone Mrrow aspiration results were as follow:
Myeloid series: 52%
Eruthroid series: 40%
Lymphocyte: 60%
Plasma cell: 2%
M/E ratio: 1.3

In cases with suspicion of tuberculosis, corticosteroid therapy is not recommended and the treatment should be postponed until negative results in microbiological and serological test would be achieved(11). Following the patient's discharge, he received antituberculous medication with 300 mg/24 h of isoniazide, 450 mg/24 h of rifampicine and 600 mg/24 h of ethambutole. Eventually patient's colonoscopies, 1.5 months and 3 months after the discharge revealed negative results for M. tuberculosis.

Discussion

Gastrointestinal tuberculosis is an uncommon disease (12). As symptoms are non-specific in intestinal TB cases, the diagnosis is difficult, and the mortality and morbidity of the disease are high(13). In such cases, the diagnostic procedure is colonoscopy and after that surgical exploration. However, colonoscopy is the first choice as it is less invasive and allows for histopathological and microbiological sampling(14). Tuberculosis

affects usually the distal ileum and the ileocecal region, which makes the differential diagnosis difficult especially with Crohn's disease(15). Staining and culture for acid-fast bacilli in colon biopsies are positive in only 32-35% and 36-40% of patients respectively(16). The management of gastrointestinal TB relies on anti-tuberculosis medications. Surgical intervention is reserved for intestinal TB complicated by perforation, obstruction, or uncontrollable haemorrhage(14). In cases presenting with complications such as a perforation, an emergency laparotomy is performed before a diagnosis of intestinal TB is made, therefore evaluation of TB in other intra-abdominal organs cannot be carried out. Intestinal TB should also be kept in mind while investigating the causes of emergency surgery for conditions such as perforation, obstruction or bleeding of the intestines, especially in geographical areas where TB is endemic. During the postoperative period, other intra-abdominal organs should also be examined regarding the presence of infection in addition to the lungs. In the case of detection of a focus, the required treatment must be given. A standard course of anti-TB therapy similar to that of pulmonary TB is usually highly effective in the treatment of intestinal TB. In the cases where there is strong clinical suspicion and no definitive diagnosis, it is recommended to administer antituberculosis treatment first, bearing in mind that it does not negatively affect Crohn's disease(17).

Conclusion

In TB high burden regions such as Iran and other Middle East countries, clinical diagnosis is the main tool for making decision about tuberculosis cases, in view of the fact that it can prevent additional permanent disabilities. Thus intestinal TB should always be kept in mind while investigating the conditions such as perforation, obstruction or bleeding of the intestines, especially in the endemic regions. In Iran it is a must to involve private system in tuberculosis program due to high coverage of physicians especially in remote rural area. Furthermore early accurate diagnosis could prevent invasive procedures.

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Consent

Written informed consent was obtained from the patient for publication of this study.

Competing interests

The authors declare that there is no conflict of interest.

Authors' contributions

All authors contributed to the writing of the manuscript. All authors read and approved the final manuscript.

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