

REVIEWS

Crohn's Disease or Intestinal Tuberculosis. A Diagnostic Challenge

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Abstract

Crohn's disease and intestinal tuberculosis (TB) share many clinical, radiological and endoscopic features. A definitive diagnosis in these cases is extremely important, to avoid the toxicity of unnecessary antituberculous therapy in patients with Crohn's disease and potentially fatal immunosuppressive treatment in patients with intestinal TB. A 42-year-old male presented with weight loss, recurrent fever, diarrhea, right iliac fossa pain, night sweats for several months. Abdominal ultrasonography with ileo-cecal wall thickening and retroperitoneal adenopathies and colonoscopy evaluation were thought to be consistent with Crohn's disease. However, the diagnosis was disseminated tuberculosis with lung and colon involvement based on the diffuse, bilateral small nodules seen on Chest X-ray and tuberculoid granulomas revealed on the colon biopsies.

Keywords: extra-pulmonary, intestinal, tuberculosis, mimicking, Crohn's disease

Rezumat

Boala Crohn și tuberculoza intestinală prezintă multe asemănări clinice, radiologice și endoscopice. Diagnosticul, în aceste cazuri, este extrem de important, pentru a evita toxicitatea terapiei antituberculoase la pacienții cu boala Crohn și tratamentul imunosupresor cu potențial letal la pacienții cu tuberculoză intestinală.

Expunem cazul unui pacient de 42 de ani, de sex masculin, ce s-a prezentat pentru scădere ponderală, febră recurentă, scaune diareice, durere la nivelul fosei iliace drepte, transpirații nocturne, simptomatologie debutată de circa 3 luni și agravată progresiv.

Ultrasonografia abdominală cu îngroșare de perete ileocecal și adenopatii retroperitoneale plus aspectul colonoscopic a ridicat suspiciunea bolii Crohn. Cu toate acestea, diagnosticul a fost de tuberculoză diseminată cu afectare pulmonară și colonică bazat pe noduli mici diseminați difuz în ambele câmpuri pulmonare văzuți la radiografia pulmonară și pe granuloamele tuberculoide de la nivelul peretelui colonic evidențiate la examenul histopatologic.

Cuvinte-cheie: extra-pulmonar, intestinal, tuberculoză, boala Crohn

INTRODUCTION

TB usually affects the lungs but many other organs may be involved. Intestinal tuberculosis primarily involves the distal ileum and cecum, followed by the jejunum, colon and rectum. The development of strictures and fistulas mimic Crohn's disease, and generalized colonic involvement mimics ulcerative colitis.

A 42 year old patient was admitted to the Gastroenterology Department of Emergency Clinical Hospital Bucharest with a 3 months history of unintentional weight loss (15 kg), diarrhea (7-8 unformed stools per day), right iliac fossa pain, night sweats. He had a history of recent fungal esophagitis and antral gastritis. He denied prior contact with patients with tuberculosis and has no pets.

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A physical examination was notable for mild tachypnea and tachycardia. The blood pressure was 120/70 mmHg and temperature 36,9°C. Abdomen was painful at medium compression in right lower quadrant, without any palpable mass or signs of acute abdomen. Laboratory tests showed an important inflammatory syndrome and anemia (leukocytes 12000/mmc; platelets 575000/mmc; hemoglobin 10 g/dl; ESR 64 mm/h; C reactive Protein 40 mg/dl). An abdominal ultrasonography (Figure 1) was performed with finding of thickened ileo-cecal wall and retroperitoneal adenopathies.

Through colonoscopy, ulcerated lesions were observed, covered by fibrin in the transverse colon and ascending colon, and inflammatory bulging lesion with ulcers in the cecum, ileocecal valve and terminal ileum (Figure 2). Based on ultrasound and colonoscopic appearance Crohn's disease was suspected.

Plain chest radiography performed at this time revealed diffuse, bilateral small nodules (Figure 3). HIV serology was normal.

The histopathological analysis of biopsies made in the ascending colon, cecum and ileocecal valve showed

tuberculoid granulomas (Figure 4). Therefore, the patient was diagnosed as having disseminated tuberculosis with lung and colon involvement. A full course of anti-tuberculosis treatment comprising isoniazid, rifampicin, pyrazinamide and streptomycin was given for 12 months. He had an uneventful recovery after anti-tuberculosis treatment.

DISCUSSION

According to *World Health Organisation* (WHO), antibiotic-resistant TB is a major public health problem that threatens the progress made in TB care and control worldwide.

Romania has the highest number of people suffering from TB in the European Unit. Around 12 000 people are diagnosed with TB each year, of whom 500 were diagnosed with multi-drug resistant tuberculosis (MRD-TB).

TB is a globally prevalent infectious disease, and ITB (intestinal tuberculosis) accounts for 1–3% of all TB cases. The acquired immune deficiency syndrome (AIDS) and immunosuppression, combined with li-



Figure 1. Thickened ileo-cecal wall and retroperitoneal adenopathies.

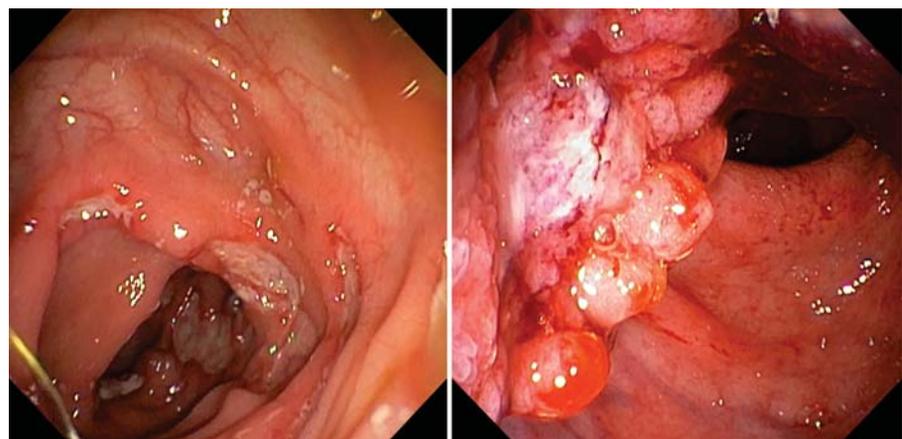


Figure 2. Ulcerated lesions in the transverse colon and inflammatory bulging lesion with ulcers.



Figure 3. Diffuse, bilateral small nodules.

limited access to treatment and inadequate sanitation system, favor increased incidence of gastrointestinal TB.

The diagnosis of ITB is always a challenge and it is difficult to make the correct differential diagnosis especially with Crohn's disease and with different neoplastic diseases. The diagnostic approach has implications in the correct management and therefore in the survival of patients. While ITB is a curable disease, Crohn's disease is a progressive relapsing illness, and intestine neoplasms, such as lymphoma or adenocarcinoma may have an endoscopic appearance of circumferential thickening, with ulcers and fistulae formation that mimic Crohn's disease or ITB. In addition, amebiasis, Behcet disease, enteric fever, *Yersinia* infection or ischemic enteritis can mimic symptoms of intestinal TB and may cause diagnostic confusion. Ischemic enteritis occurs due to interruption or significant decrease of the arterial blood flow to the small intestine. Elderly patients are most often affected, while younger patients, especially those with diabetes, lupus erythematosus or sickle-cell anemia, may also present with ischemic enteritis¹.

The ileocecal region was the most frequently affected site of the gastrointestinal tract, in around 85% of the

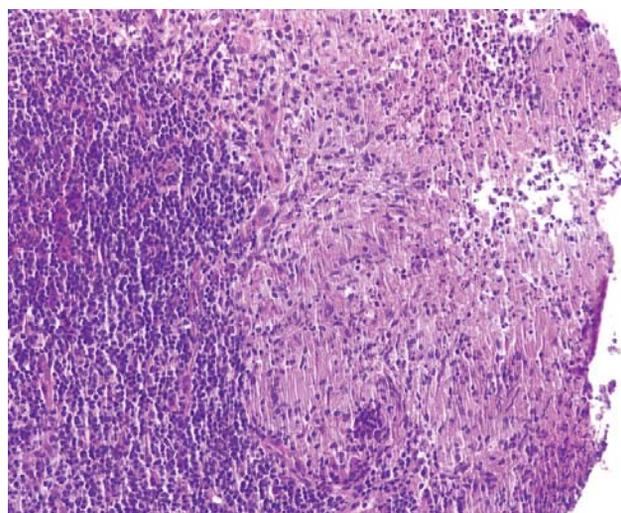


Figure 4. Granulomatous reaction with multinucleated giant cells, epithelioid histiocytes, necrosis.

cases². On the other hand, the gastric involvement is rare, possibly due to the acidity and scarcity of lymphoid tissue and the quick passage of its content to the small bowel³.

The diagnostic procedure of choice is colonoscopy combined with biopsy, as it allows the direct visualization of lesions and the access to the ileocecal region in case of no obstructions. PCR may provide a fast diagnosis of extrapulmonary TB, with sensitivity ranging from 64 to 86% and specificity of 100%⁴.

Surgery is indicated in case of diagnostic impossibility or treatment failure⁵.

Intestinal TB should be considered as differential diagnosis of patients with chronic diarrhea and vague abdominal symptoms, especially in patients that come from areas where TB is endemic.

CONCLUSIONS

In conclusion, investigation of patients with suspected Crohn's disease should always include differential diagnosis with intestinal tuberculosis. It is very important to prevent unnecessary inappropriate anti tuberculous therapy for patients with Crohn's disease and appropriate early treatment for cases with tuberculosis. In developing countries, where TB is endemic, starting ATT would be more appropriate in cases of diagnostic confusion.

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