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Intestinal Tuberculosis with Small Bowel Perforation in a Patient with AIDS: A Case Report

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ABSTRACT

Tuberculosis is an infection that continues to be a global health problem, mainly in underdeveloped countries. Intestinal presentation is rare but increases in immunocompromised patients. Its symptoms are variable and can mimic chronic inflammatory diseases, leading to a difficult initial diagnosis, complications, and increased mortality. We present the case of a young and recently diagnosed HIV patient with chronic and nonspecific condition of diarrhea and abdominal pain, which was complicated by intestinal perforation triggered by an extrapulmonary infection and Mycobacterium tuberculosis. It was resolved by surgery, leading to a pathological diagnosis by biopsy, followed by effective antibiotic treatment.

KEYWORDS: Mycobacterium tuberculosis, Intestinal tuberculosis, Small bowel perforation

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INTRODUCTION

Tuberculosis is a worldwide health problem; the incidence of extrapulmonary involvement continues to increase, mainly in populations with HIV. Severe immunosuppression represents 10% of active tuberculosis cases, while the rest are favored by comorbidities, a pro-inflammatory environment, and unknown genetic propensity. Intestinal tuberculosis accounts for 2% of tuberculosis cases worldwide; thus, its diagnosis is a challenge, with high error rates even in countries where tuberculosis is endemic. [1–2] Abdominal infection can occur due to the reactivation or ingestion of tuberculous mycobacteria, developing through hematogenous, lymphatic, or contiguous dissemination. Clinical manifestations depend on the form of the disease and may include fever, weight loss, pain, or abdominal distension. In the small intestine, the most common forms are ulcerative and stenotic, mainly affecting the ileocecal area. [3–4]

CASE PRESENTATION

The 31-year-old male, with no significant family history, had a personal pathological history of HIV infection, diagnosed 3 weeks prior by three positive ELISA tests and Western blot, is presented. Neither a viral load result nor a CD4 T lymphocyte count had been performed upon admission, and he was not yet on antiretroviral treatment.

His current condition began 2 weeks prior to his hospitalization, with general malaise, vomiting gastro-alimentary content on multiple occasions, Bristol 6 diarrheal stools not accompanied by mucus or blood, and moderate-intensity abdominal pain in the epigastric and mesogastric regions exacerbated by nutritional intake. He was evaluated by a medical doctor who prescribed nonspecific treatment that intermittently improved the clinical condition.

Due to persistent symptoms, including a quantified fever of 39.3° C and weight loss of 5 kg (7% of body weight), he sought hospital evaluation. Upon arrival, the patient was received in poor general condition, with fever and abdominal pain. An ultrasound was performed, and evidence of an abdominal tumor in the retroperitoneal region was reported, and a follow-up simple abdominal CT scan was requested. The CT scan showed a mass in the epi- and retroperitoneal mesogastrium regions, with a 4.5 cm heterogeneous solid–liquid in the right flank of the colon as well as a heterogeneous mass with poorly defined borders of 6 cm in length (Figures 1 and 2). During hospitalization, he had a bowel movement with hematochezia; thus, a colonoscopy was performed without evidence of infiltration.

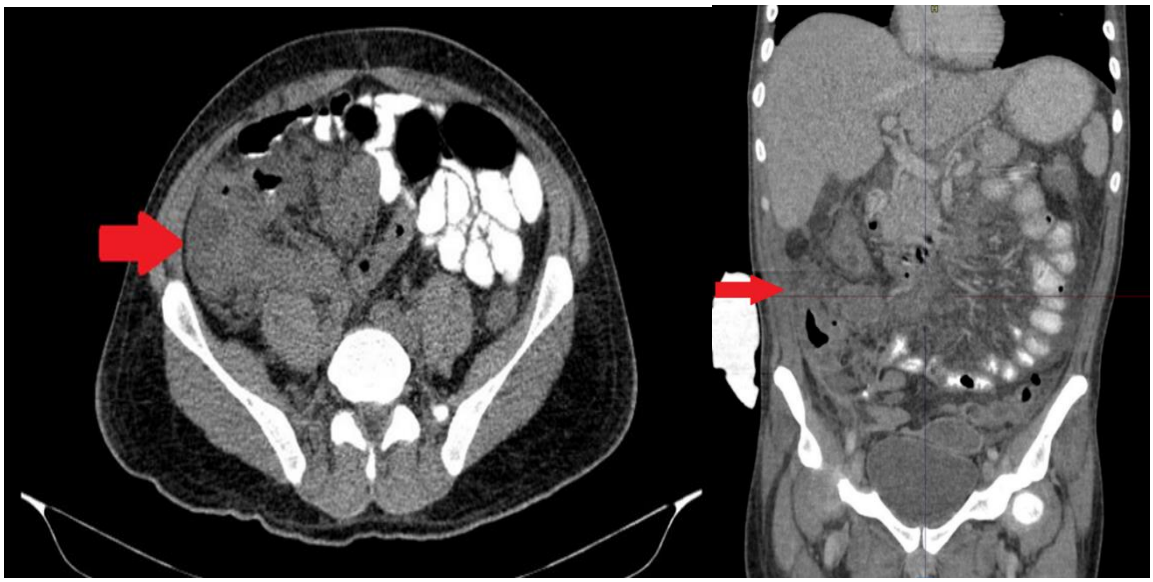

Figure 1 and 2. CT scan showing mass in the retroperitoneal epi and mesogastrium region with a 4.5 cm heterogeneous solid-liquid mass.

During the hospital stay, abdominal distention and hemodynamic instability both increased, prompting an emergency exploratory laparotomy, which found perforations in the distal ileus and multiple caseous granulomas. The cavity and ileostomy were cleaned, and a sample was sent to pathology. The Xpert MTB/RIF was positive for mycobacteria without detected resistance, and therapeutic regimen was started using Isoniazid, Rifampicin, Ethambutol, and Pyrazinamide. A CD4 T lymphocyte count result was obtained with a result of 47 cells/ul.

DISCUSSION

Currently, the combination of clinical symptoms, endoscopy, radiological studies, and pathological findings are key to diagnosing tuberculosis, which predominantly affects the ileocecal region (64%). Colonoscopy was performed in our patient due to the higher incidence of colon involvement (10.8% in immunocompromised patients). Even though it was negative, it served to eliminate Crohn's disease as a cause due to the findings of an irregular, nodular erythematous and edematous mucosa with areas of ulceration. A simple or contrast-enhanced abdominal CT shows more sensitivity, with the patient's scan demonstrating mural thickening in the intestine, abdominal lymphadenopathy with central necrosis, and intra-abdominal collections or peritoneal inflammation in intestinal tuberculosis. [1,5] The tuberculin skin test is sensitive to Mycobacterium tuberculosis infection, but in HIV-infected patients with disseminated disease, the result is usually negative; thus, tests such as PCR, aspiration, and biopsy are indicated in patients with HIV. The definitive diagnosis should be based on a high suspicion and presence of caseating granulomas in intestinal biopsies together with a positive smear or culture for acid-fast bacilli. [6–7]

Treatment of tuberculosis should be given priority and precede treatment of HIV infection. If the patient is already receiving highly active antiretroviral therapy (HAART), they should continue the same treatment with appropriate adjustments. Patients not currently receiving HAART should be evaluated on an individual basis after determining CD4 count and tuberculosis type. The treatment of choice is antituberculosis therapy for at least 6 months, including an initial 2 months of Isoniazid, Rifampin, and Pyrazinamide, followed by 4 months of Isoniazid and Rifampicin. The response to medical treatment is usually good. Surgery is reserved for cases without response or with complications such as perforation, abscess, fistula, bleeding, or high-grade obstruction. However, even in cases of stenosis, medical management will result in significant resolution of symptoms in the majority of patients; thus, invasive follow-up studies are not required if they remain asymptomatic. [7–8]

CONCLUSION

Intestinal tuberculosis is a rare presentation of Mycobacterium tuberculosis, accounting for only 2% of all tuberculosis cases worldwide. Immunosuppression is one of the main factors associated with its appearance. It is mostly associated with infection with acquired immunodeficiency viruses, occurring mainly in people with CD4 counts less than 200 (AIDS), as was the case with our patient. If it is not treated in a timely manner, complications may arise, such as in our patient, who presented with intestinal perforation. Antituberculosis treatment should focus on the same therapeutic guidelines, with a favorable response in most cases.

REFERENCES

I. Kim SH, Kim JW, Jeong JB, et al. Differential diagnosis of Crohn's disease and intestinal tuberculosis in patients with spontaneous small-bowel perforation. Dig Surg. 2014;31:151---6, http://dx.doi.org/10.1159/000363066.

II. Maiti, Sukumar, and Krishnendu Bikash Maiti. "Gastrointestinal Tuberculosis and HIV Association in Tropics." *Indian Journal of Surgery*, vol. 83, no. Suppl 4, Oct. 2021, pp.

III. Cardona PJ. Pathogenesis of tuberculosis and other mycobacteriosis. Enferm Infecc Microbiol Clin (Engl Ed). 2018 Jan;36(1):38-46. English, Spanish. doi: 10.1016/j.eimc.2017.10.015. Epub 2017 Dec 2.

IV. Malikowski T, Mahmood M, Smyrk T, Rafals L, Nehra V. Tuberculosis of the gastrointestinal tract and associated viscera. J Clin Tuberc Other Mycobact Dis. 2018;12:1–8.

V. Shi X-C, Zhang L-F, Zhang Y-Q, et al. Clinical and laboratory diagnosis of intestinal tuberculosis. Chin MedJ(Engl).2016;129:1330---3,http://dx.doi.org/10.4103/0366-6999.182840.

VI. Kumar S, Bopanna S, Kedia S, Mouli P, Dhingra R, Padhan R, Kohli M, Chaubey J, Sharma R, Das P, Dattagupta S, Makharia G, Sharma SK, Ahuja V. Evaluation of Xpert MTB/RIF assay performance in the diagnosis of abdominal tuberculosis. Intest Res. 2017 Apr;15(2):187-194. doi: 10.5217/ir.2017.15.2.187. Epub 2017 Apr 27

VII. Sukumar Maiti, Krishnendu Bikash Maiti. Gastrointestinal Tuberculosis and HIV Association in Tropics. Indian Journal of Surgery, 2021, Volume 83, Number 4, Page 867.

VIII. Debi U, Ravisankar V, Prasad KK, et al. Abdominal tuberculosis of the gastrointestinal tract: Revisited. World J Gastroenterol. 2014;20:14831---40, http://dx.doi.org/10.3748/wjg. v20.i40.14831.