

CASE REPORT

Enteropathic Arthritis Accompanied by Tuberculous Colitis: A Case Report



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Enteropathic arthritis (EnA) is a type of spondyloarthritis with inflammatory bowel disease, such as ulcerative colitis and Crohn's disease, which is challenging to differentiate from tuberculous colitis. Patients with EnA living in endemic tuberculosis have a high risk of tuberculosis infection (tuberculous colitis), which triggers a recurrent increase in disease activity. Discontinuation of corticosteroid therapy in EnA and early start to antituberculosis drugs are recommended in the patients. Complete treatment of tuberculosis helps improve the prognosis of tuberculous colitis. Patient compliance in treatment plays a crucial role in managing tuberculous colitis exacerbated by EnA in endemic areas.

Keywords: Enteropathic Arthritis; Infectious; *Mycobacterium tuberculosis*; Tuberculous Colitis

Introduction

Enteropathic arthritis (EnA) is characterized by joint inflammation associated with chronic inflammatory bowel disease (IBD), such as ulcerative colitis and Crohn's disease.¹ EnA is a rare condition with an incidence rate of 300 cases per 100,000 individuals in the Western population.² The prevalence of EnA in Indonesia has not been specifically identified, as the most available data are spondylarthritis.^{3,4} Meanwhile, Indonesia has an endemic tuberculosis,⁵ in which tuberculous colitis, a consequence of *Mycobacterium tuberculosis* (MTB) infection, occurs in only 2%–3% of cases of gastrointestinal tuberculosis.⁶ The study aimed to report an Indonesian woman with EnA accompanied by tuberculous colitis.

Case Report

A 24-year-old Indonesian woman has been diagnosed with EnA and has been regularly attending outpatient visits for the past year. One year ago, the patient presented with hematochezia and polyarthritis. A colonoscopy was performed, which indicated the presence of Crohn's disease in the ascending colon, cecum, and terminal ileum. Furthermore, the biopsy test revealed the presence of nonspecific chronic colitis. Stool and tissue samples were subjected to

Ziehl-Nielsen staining and culture testing, which revealed no presence of pathogens or MTB. The patient has been diagnosed with EnA and is currently undergoing treatment with sulfasalazine 3 × 500 mg, methylprednisolone 1 × 4 mg, and lansoprazole 1 × 30 mg. Throughout the 1-year treatment, there was no occurrence of bloody stool, the sensation of joint discomfort ceased, and there was a notable enhancement in the prognosis for the therapy.

The patient exhibits polyarthritis and joint stiffness in the fingers, elbows, shoulders, and knees. These symptoms typically occur in the morning and improve with physical activity. Furthermore, concurrently, the patient had a decrease in hunger and a weight loss of 5 kg (initially weighing 49 kg and decreasing to 44 kg). These problems have persisted for the past 2 months without bloody stool. The patient's family, specifically the grandmother, had a previous occurrence of pulmonary tuberculosis, which was successfully treated. It is worth noting that both the patient and the grandmother were in the same household. The laboratory examination results revealed the following values: hemoglobin of 9.4 g/dL, hematocrit of 30%, mean corpuscular volume of 54 fL, mean corpuscular hemoglobin of 18 pg, neutrophils of 76.0%, lymphocytes of 14.7%, platelets of 485,000/mm³, erythrocyte sedimentation rate of 89 mm/h, C-reactive protein of 2.03 mg/dL, and uric acid of 4.6 mg/dL. According to the endoscopic findings, Crohn's disease and tuberculous colitis were observed in ascending order (Figure 1). The follow-up biopsy revealed granulomatous colitis that was in line with tuberculosis, and the Ziehl-Neelsen stain demonstrated the presence of acid-resistant bacteria (Figure 2). The patient's condition was determined to be tuberculous colitis, which was further worsened by EnA.

The patient discontinued methylprednisolone and was prescribed sulfasalazine at a dosage of 3 × 500 mg/day, along with Lansoprazole at a dosage of 30 mg/day. She was administered 4 fixed-dose combinations (Rifampicin 150

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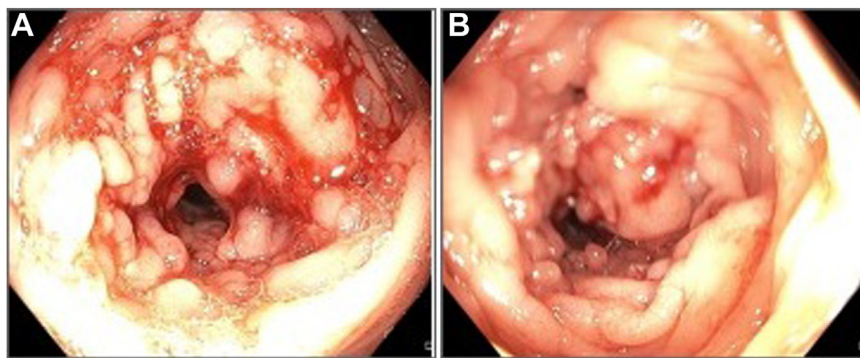


Figure 1. (A, B) Ascending endoscopic showed granulomatous lesions, a cobblestone-like appearance, friable mucosa, a narrow lumen, and an obstructed scope.

mg, Isoniazid 75 mg, Pyrazinamide 400 mg, Ethambutol 275 mg). The dosage consisted of 3 tablets per meal, taken daily. On a monthly basis, the patient underwent assessments for persistent discomfort in the fingers, knees, and feet, which were still present but had decreased in intensity compared to previous evaluations. The individual had an enhancement in their appetite and did not report any instances of nausea or vomiting. As there were no complaints regarding defecation, the medication continued. During the sixth month after completing tuberculosis therapy, a colonoscopy revealed the presence of IBD and Crohn's disease. A biopsy confirmed the presence of unspecific chronic colitis. Additionally, a GeneXpert MTB/rifampicin test conducted on fecal samples showed no detection of MTB. The patient is currently free of joint discomfort, although there is still intermittent stiffness specifically in the finger joints. Furthermore, there are currently no reports of gastrointestinal issues.

Discussion

Diagnosis of tuberculous colitis must meet at least one of the following criteria: (1) presence of acid-fast bacteria on smear or histology; (2) confirmation of tuberculosis at extraintestinal organs through microbiological or histological analysis; (3) positive culture for acid-fast bacilli; (4) detection of granulomas on histopathology in the intestinal, peritoneal, colon, or lymph nodes; and (5) positive results for tuberculosis-polymerase chain reaction in stool specimens.⁷

The therapeutic approach for EnA is like spondylarthritis and IBD, as they share similar disease mechanisms.

However, there are variations in the safety and effectiveness of the treatment methods. The objective of management is to regulate both IBD and spondylarthritis by administering sulfasalazine and to consider the use of biological agents anti-tumor necrosis factor- α (anti-TNF- α) promptly, if necessary, or conventional disease-modifying antirheumatic drug for persistent cases.⁸

A recent study found that the occurrence of active tuberculosis was more common in individuals with untreated Crohn's disease compared to the general population. However, the risk increases even further when patients are taking corticosteroids or anti-TNF- α monotherapy or a combination of corticosteroids, immunomodulators, and/or anti-TNF- α agents.⁹ There is evidence suggesting that the utilization of conventional disease-modifying antirheumatic drugs is associated with an elevated susceptibility to tuberculosis infection. Nevertheless, the use of sulfasalazine was linked to a decreased likelihood of contracting tuberculosis infection. This innovative discovery has not been documented in the existing body of literature. Sulfasalazine is a compound converted into sulphapyridine and 5-aminosalicylic acid in the body. The antibacterial properties of sulphonamides could potentially decrease the risk of tuberculosis infection. Their action is limited to modest immunomodulation/immunosuppression.^{10,11}

The adherence of tuberculosis patients to therapy is crucial for successfully treating the disease due to the difficulties associated with ensuring patient compliance. According to a prior study, it was revealed that 88.5% tuberculosis patients who adhered to their medication were cured.¹² The primary challenge in the management of tuberculosis is patient adherence, which has been observed

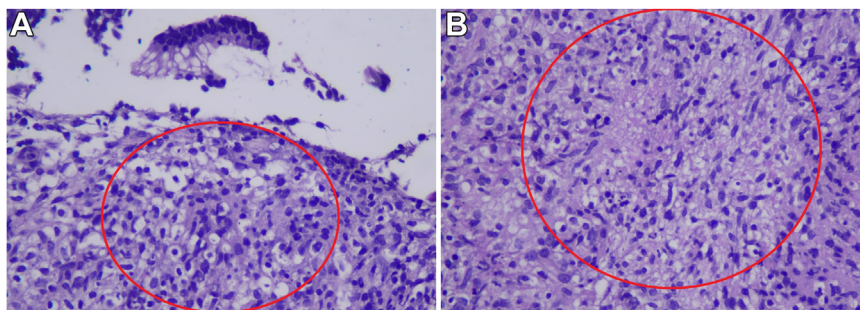


Figure 2. (A, B) Biopsy revealed granulomatous tuberculosis.

to be very low in specific trials, leading to the development of resistance against antituberculosis drugs.¹³

Recurrent symptoms of EnA caused by tuberculosis infection. Treatment of tuberculous colitis uses antituberculosis drug for 6 months which patient compliance plays a vital role. Symptoms of EnA improve with complete tuberculosis treatment.

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The authors disclose no conflicts.

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Ethical Statement:

Ethical approval is exempt/waived at Dr. Soetomo General Academic Hospital, Surabaya, Indonesia because the report only has one patient. Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Reporting Guidelines:

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