Isolated Rectal Tuberculosis with Multiple Ulcers

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Abstract

Isolated rectal tuberculosis is a rare disease. It most commonly presents with haematochezia. Here we present a case of a 17 year old female patient, presenting with fever, diarrhoea and haematochezia, who was subsequently diagnosed as having rectal tuberculosis with multiple ulcers on colonoscopy-guided biopsy.

Introduction

In developing countries of the world tuberculosis is a very common disease. With varied presentations gastrointestinal tuberculosis is also common in our country. Isolated rectal tuberculosis is very rare, even in the developing countries of the world. This form of tuberculosis, if diagnosed timely, can be adequately controlled by antitubercular drugs.

Case Report

A 17 year old female patient presented with the chief complaints of fever for last three months, associated with passage of fresh blood in stools. There was history of loose stools for the same duration, 4-5 times in frequency, small in volume. She also had anorexia and weight loss. The fever was low grade, intermittent, not associated with chill, rigor, and it seldom crossed 101°F. The diarrhoea was associated with tenesmus. There was no past history of tuberculosis or contact with tuberculosis. Physical examination revealed mild pallor. Except this, the general and systemic examination was non-contributory. Perrectal examination was performed and it was normal.

Figs. 1-2: Colonoscopy showed multiple areas of ulceration with necrotic base, nodularity and friability involving the rectum about 6 cm from the anal verge.
Investigations revealed haemoglobin 9.2 g/dL, total leucocyte count 6500/ cu mm (neutrophil 62%, lymphocyte 36% and eosinophil 2%), ESR 60 mm / hr. The patient had fasting blood sugar 85 mg/dL, urea 26 mg/dL, and creatinine 0.8 mg/dL. Liver function tests showed normal bilirubin and enzymes. Stool examination revealed 6-8 leucocytes and 5-6 pus cells per cubic millimeter. On Mantoux test induration was 11 mm. Ultrasonography of the whole abdomen did not reveal any abnormality. Chest radiograph was within normal limits. Colonoscopy was performed. It showed multiple areas of ulceration, nodularity and friability involving the rectum, about 6 cm from the anal verge (Figures 1 - 2). The largest ulcer was 3 cm×2 cm in dimension, with a necrotic base and undermined edges. Biopsy was taken from the margin of the ulcer. Histopathological examination showed caseating granulomas in the specimen, along with Langerhans giant cells. There was no evidence of malignancy. Rest of the colon appeared normal. It was diagnosed as a case of isolated rectal tuberculosis.

The patient was put on anti-tubercular drugs: rifampicin 450 mg, isoniazid 300 mg, pyrazinamide 1500 mg and ethambutol 800 mg. These four drugs were continued for two months, and then she had rifampicin and isoniazid for the next six months. A repeat colonoscopy done after three months of starting of anti-tubercular treatment showed visible healing of the ulcers. Meanwhile, her fever subsided, haematochezia had also stopped, pallor improved, and she gained 2 kg weight. Her stool frequency also came down to 1-2 times per day. She has been doing well till date.

**Discussion**

Tuberculosis of gastrointestinal tract can involve any portion of bowel extending from oesophagus to anus; however, involvement of bowel distal to ileocaecal junction is infrequently seen. Anorectal tuberculosis accounts for less than 2% cases of abdominal tuberculosis. It is generally associated with pulmonary tuberculosis, active or healed; but cases of isolated colonic tuberculosis without systemic features have been reported. Primary infection of gastrointestinal tract with tuberculosis is commonly of hyperplastic or hypertrophic forms while secondary lesions are ulcerative types. Our case had isolated rectal tuberculosis with ulcerative lesions, no lung parenchymal lesions being detected. Patients may present with bleeding per-rectum, constipation alternating with diarrhoea, intestinal obstruction or pain while passing stools.

Endoscopic differential diagnosis of anorectal tuberculosis includes Crohn’s disease, herpes simplex lesions, cytomegalovirus, sarcoidosis, amoebiasis, deep mycosis, syphilis, actinomycosis, lymphogranuloma venereum and ulcerative neoplasms. Biopsy with histopathological examination and culture may be helpful for differentiating them. Differentiating between anorectal tuberculosis and Crohn’s disease may be difficult. Both conditions have certain similar features including mucosal ulcerations and nodularity, aphthous ulcers, oedematous mucosal folds, strictures, pseudopolyps, colonic skip lesions, ileocaecal spread and granulomas on histological examination. Acid fast staining and culture can help in accurate diagnosis. In superficial endoscopic mucosal biopsies, confluent granulomas with or without caseation, responding to antituberculosis therapy may also be taken as confirmatory evidence. Granulomas can be demonstrated in biopsies in 27% of cases and culture is positive in 36% of patients. In case of the negative cultures and stains for mycobacterium tuberculosis, a polymerase chain reaction is recommended. Rectal TB can present with annular stricture or with ulceration of mucosa with fibrosis. Its radiological and endoscopic appearances may be extremely similar to malignant rectal lesion and only biopsy can clinch the diagnosis.

There are six morphological types of anorectal tuberculosis including: (a) fistula in ano (commonest), (b) ulcer with undermined edges (next frequent), (c) stricture (short, annular and firm with nodular surface) - to be differentiated from malignancy and granulomatous stricture, (d) multiple small mucosal ulcers (part of disseminated miliary disease), (e) lupoid form (submucosal nodule with mucosal ulceration), and (f) verrucous form (smooth warty excrescences).

Antitubercular drugs can cure anorectal tuberculosis and have made surgery, if at all required, safe. Most publications are in case report form and showed that at least six months of conventional antitubercular therapy is required for treatment of anorectal tuberculosis. Our patient responded well to anti-tubercular drugs for eight months, alleviating surgery in this case. Tai et al in a study from Taiwan reported that all patients (16 out of 17 patients) who completed a full course of antitubercular drugs for at least six months after surgical intervention were cured without recurrence except for one patient who was lost to follow-up after two months of treatment. Seven of the nine patients with complicated fistulae needed longer anti-mycobacterium treatment (9–18 months). Many reports suggest that the hypertrophic form of gastrointestinal tuberculosis do not respond well to drug therapy. However, Subnis et al reported an unusual case of hyperplastic form of rectal tuberculosis responded well to anti-tubercular drugs. Surgical treatments may be required if: a) stenosis persists after three to six months of antitubercular...
treatment; b) it is difficult to differentiate from malignancy; and c) malignancy and tuberculosis coexist.

References