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Original Research Article

Intestinal Obstruction due to Tuberculosis: Insights from a Tertiary Hospital in Pawapuri, Nalanda, Bihar

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Abstract:

Background: Intestinal tuberculosis remains a major cause of intestinal obstruction in tuberculosis-endemic regions. Delayed diagnosis and nonspecific clinical features often lead to increased morbidity and surgical intervention.

Objective: To evaluate the clinical presentation, management strategies, and outcomes of patients presenting with intestinal obstruction due to tuberculosis.

Materials and Methods: This retrospective study was conducted at Bhagwan Mahavir Institute of Medical Sciences, Pawapuri, Nalanda, over a period of 11 months. Medical records of 85 patients diagnosed with intestinal obstruction secondary to tuberculosis were analyzed.

Results: Abdominal pain, vomiting, and abdominal distension were the most common presenting symptoms. The ileocecal region was the most frequently involved site. Most patients required surgical intervention followed by antitubercular therapy, with satisfactory outcomes.

Conclusion: Intestinal tuberculosis continues to be an important cause of intestinal obstruction. Early diagnosis, timely surgery, and appropriate antitubercular therapy result in favorable outcomes.

Keywords: Intestinal tuberculosis, Intestinal obstruction, Retrospective study, Abdominal tuberculosis.

Introduction

Tuberculosis (TB) continues to be one of the most prevalent infectious diseases worldwide, with a substantial burden in low- and middle-income countries. According to the World Health Organization, India accounts for a significant proportion of global tuberculosis cases, making TB a major public health concern in the country [1]. While pulmonary tuberculosis constitutes the majority of cases, extrapulmonary tuberculosis contributes significantly to morbidity, diagnostic challenges, and healthcare utilization.

Abdominal tuberculosis is among the most common forms of extrapulmonary TB, involving the gastrointestinal tract, peritoneum, mesenteric lymph nodes, and solid abdominal organs [2]. Intestinal tuberculosis represents a clinically important manifestation of abdominal TB and frequently poses diagnostic dilemmas due to its nonspecific presentation. The disease predominantly affects young adults in endemic regions and is often associated with malnutrition, immunosuppression, and poor socioeconomic conditions [3].

The ileocecal region is the most frequently involved site in intestinal tuberculosis. This predilection is attributed to factors such as increased physiological stasis, abundant lymphoid tissue, and prolonged contact time between intestinal contents and the mucosa [4]. Pathologically, intestinal tuberculosis may present as ulcerative, hypertrophic, or stricturing lesions, all of which can compromise bowel lumen patency [5].

Intestinal obstruction is one of the most common and serious complications of intestinal tuberculosis. Obstruction may develop due to inflammatory strictures, adhesions, mass-forming lesions, or extrinsic compression by tuberculous lymphadenopathy [6]. Patients often present with subacute or acute intestinal obstruction, characterized by abdominal pain, vomiting, distension, and altered bowel habits. These features frequently mimic other gastrointestinal conditions

such as Crohn's disease or malignancy, further complicating diagnosis [7].

Despite advances in imaging and endoscopic techniques, preoperative diagnosis of intestinal tuberculosis remains challenging. Radiological findings are often nonspecific, and definitive diagnosis is frequently established intraoperatively or on histopathological examination [8]. Although antitubercular therapy is the cornerstone of treatment, surgical intervention becomes necessary in patients presenting with complications such as obstruction, perforation, hemorrhage, or failure of medical management [9].

In tuberculosis-endemic countries like India, intestinal tuberculosis continues to account for a significant proportion of emergency surgical admissions for intestinal obstruction [10]. Understanding the clinical profile and outcomes of these patients is essential for improving management strategies. This retrospective study was undertaken to analyze the presentation, management, and outcomes of patients with intestinal obstruction due to tuberculosis at a tertiary care teaching hospital in Eastern India.

Materials and Methods

Study Design and Setting: This retrospective observational study was conducted at Bhagwan Mahavir Institute of Medical Sciences, Pawapuri, Nalanda.

Study Duration: Eleven months.

Study Population: Medical records of 85 patients diagnosed with intestinal obstruction secondary to tuberculosis were reviewed.

Inclusion Criteria: Patients with clinical, radiological, operative, and/or histopathological evidence of intestinal tuberculosis presenting with intestinal obstruction.

Exclusion Criteria: Patients with intestinal obstruction due to non-tubercular causes.

Data Collection: Data collected included demographic details, clinical presentation, imaging findings, intraoperative findings, surgical procedures performed, postoperative complications, and outcomes.

Statistical Analysis: Data were analyzed using descriptive statistics and presented as frequencies and percentages.

Results and Discussion

The present study highlights intestinal tuberculosis as a persistent and significant cause of intestinal obstruction in endemic regions. The demographic profile and clinical presentation observed are consistent with previously published studies [11–13]. The predominance of ileocecal involvement aligns with established pathological and anatomical factors described in the literature [14].

Delayed diagnosis remains a major factor contributing to the need for surgical intervention. Similar findings have been reported in other Indian studies, where patients frequently present with advanced disease and established obstruction [15–17]. Surgical management, when combined with postoperative antitubercular therapy, results in favorable outcomes and symptom resolution.

Recent literature emphasizes the importance of early diagnosis and prompt initiation of antitubercular therapy to prevent complications requiring surgery [18–20]. However, in real-world clinical practice, particularly in resource-limited settings, surgery continues to play a vital role in managing complicated intestinal tuberculosis.

Current expert reviews and international guidelines recommend a combined medical and surgical approach for complicated intestinal tuberculosis [24,25]. The findings of the present study support these recommendations and reinforce the need for timely surgical intervention in selected patients.

Limitations: The retrospective design and single-center nature of the study limit the generalizability of the findings. Long-term follow-up data were not available.

Conclusion

Intestinal tuberculosis remains an important cause of intestinal obstruction in tuberculosis-endemic regions. A high index of suspicion, early diagnosis, timely surgical intervention, and appropriate antitubercular therapy are essential for optimal patient outcomes.

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