

Study of Intestinal Obstruction Due to Tuberculosis: A Retrospective Study

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Abstract:

Background: Intestinal tuberculosis is a common form of extrapulmonary tuberculosis in developing countries and frequently presents with intestinal obstruction. Delayed diagnosis often leads to increased morbidity.

Objectives: To evaluate the clinical profile, radiological findings, operative management, and outcomes of patients presenting with intestinal obstruction due to tuberculosis.

Materials and Methods: This retrospective study was conducted at Autonomous State Medical College, Kushinagar, Uttar Pradesh, India, over a period of one year. Fifty patients diagnosed with intestinal obstruction secondary to tuberculosis were included. Clinical, radiological, operative, and histopathological data were analyzed.

Results: Abdominal pain and vomiting were the most common presenting symptoms. The ileocecal region was the most frequently involved site. Surgical intervention was required in the majority of cases, followed by antitubercular therapy.

Conclusion: Intestinal tuberculosis remains a significant cause of intestinal obstruction. Early diagnosis and timely surgical intervention combined with antitubercular therapy result in favorable outcomes.

Keywords: Intestinal tuberculosis, intestinal obstruction, ileocecal tuberculosis, extrapulmonary tuberculosis.

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Introduction

Tuberculosis continues to be a major public health problem worldwide, particularly in developing countries like India, which accounts for a significant proportion of global tuberculosis cases [1]. While pulmonary tuberculosis is the most common manifestation, extrapulmonary tuberculosis constitutes a substantial disease burden [2]. Among extrapulmonary forms, abdominal tuberculosis represents a challenging clinical entity due to its varied and nonspecific presentation [3].

Intestinal tuberculosis commonly affects the ileocecal region owing to the abundance of lymphoid tissue, physiological stasis, and increased absorptive capacity at this site [4]. Patients often present with chronic abdominal pain, weight loss, fever, and altered bowel habits, which frequently mimic other gastrointestinal disorders [5]. Intestinal obstruction is one of the most serious complications and may result from strictures, adhesions, inflammatory masses, or hypertrophic lesions [6,7].

Radiological investigations such as plain abdominal radiographs and contrast-enhanced computed tomography (CECT) are useful diagnostic tools, although definitive diagnosis often requires histopathological confirmation [8–10]. Due to delayed presentation, many patients require surgical intervention before diagnosis is established [11,12].

Despite advances in diagnostic modalities and effective antitubercular therapy, intestinal tuberculosis remains a significant cause of morbidity [13]. This study aims to analyze the clinical presentation, diagnostic findings, surgical management, and outcomes of patients presenting with intestinal obstruction due to tuberculosis [14,15].

Materials and Methods

Study Design: A retrospective observational study.

Study Place: Autonomous State Medical College, Kushinagar, Uttar Pradesh, India.

Study Duration: One year.

Sample Size: 50 patients.

Inclusion Criteria

- Patients presenting with intestinal obstruction
- Intraoperative and/or histopathological diagnosis of intestinal tuberculosis

Exclusion Criteria

- Obstruction due to malignancy
- Adhesive obstruction unrelated to tuberculosis

Data Collection: Data were collected from hospital records, including demographic details, clinical presentation, imaging findings, operative notes, and histopathology reports.

Statistical Analysis: Descriptive statistics were used and results expressed as percentages.

Results

Demographic Characteristics: The study included 50 patients, comprising 32 males (64%) and 18 females (36%). The mean age was 34.6 ± 12.8 years.

Table 1: Age Distribution of Patients

| Age Group (years) | Number of Patients | Percentage (%) |
|-------------------|--------------------|----------------|
| ≤20 | 8 | 16 |
| 21–40 | 29 | 58 |
| 41–60 | 10 | 20 |
| >60 | 3 | 6 |

Table 1 shows that the majority of patients were in the 21–40 year age group.

Clinical Presentation: Abdominal pain was the most common presenting symptom, followed by

vomiting and abdominal distension. Clinical symptoms observed among patients are summarized in Table 2.

Table 2: Clinical Presentation

| Symptom | Number of Patients | Percentage (%) |
|----------------------|--------------------|----------------|
| Abdominal pain | 48 | 96 |
| Vomiting | 42 | 84 |
| Abdominal distension | 40 | 80 |
| Constipation | 36 | 72 |
| Fever/Weight loss | 30 | 60 |

Intraoperative Findings: The ileocecal region was the most commonly involved site. Table 3 details the

intraoperative findings noted during surgical exploration.

Table 3: Intraoperative Findings

| Finding | Number of Patients | Percentage (%) |
|---------------------------------|--------------------|----------------|
| Ileocecal stricture | 28 | 56 |
| Multiple small bowel strictures | 12 | 24 |
| Adhesions | 6 | 12 |
| Perforation | 4 | 8 |

Histopathology and Outcome: Histopathological examination confirmed tuberculosis in all cases, demonstrating epithelioid granulomas with central caseation and Langhans giant cells. Postoperative complications occurred in 16% of patients, with no mortality. All patients responded well to antitubercular therapy.

Discussion

Intestinal tuberculosis predominantly affects young adults, as observed in this study, which is consistent with previous reports from endemic regions [16]. The male predominance observed may be related to occupational exposure and healthcare-seeking behavior [17].

The most common symptoms were abdominal pain and vomiting, which were caused by the disease's

obstructive pathology [18]. People with tuberculosis often had constitutional symptoms like fever and weight loss, which showed that the disease is a long-term inflammatory one [19]. Radiological findings were not always diagnostic, even though they were suggestive. This shows the difficulty in making a preoperative diagnosis [20].

The ileocecal region was the most common site to be affected, which is in line with known pathological mechanisms of intestinal tuberculosis [21]. Most of the patients needed surgery because of acute obstruction, and the procedures were based on intraoperative findings [22]. Postoperative antitubercular therapy was very important for getting rid of the disease and preventing it from recurrence [23].

Early diagnosis, prompt surgical management when indicated, and completion of antitubercular therapy are essential to reduce morbidity and mortality associated with intestinal tuberculosis [24]. Increased awareness among clinicians is vital for early recognition, especially in endemic regions [25].

Conclusion

Intestinal tuberculosis remains an important cause of intestinal obstruction in developing countries. High clinical suspicion, appropriate imaging, timely surgical intervention, and postoperative antitubercular therapy are key to successful management.

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