

# Observation of Abdominal Tuberculosis

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## ABSTRACT

**Introduction:** Abdominal tuberculosis is a disease which can affect any organ. Primary site of tuberculosis is usually lung but abdominal tuberculosis cases are on the rise. Abdominal tuberculosis cases are difficult to diagnose because, it mimic acute abdomen due to bowel obstruction, perforation, mass abdomen and such diseases. The present observational study was carried out with the aim to evaluate the various clinical presentation, its incidence, diagnosis and various methods of management.

**Material and methods:** An observational study was done on 50 patients of abdominal tuberculosis in RIMS, Ranchi, Jharkhand. Patients were selected on the basis of signs and symptoms, clinical suspicion, routine and special investigations and confirmation by histopathological examination.

**Results:** A total of 50 patients were managed during the study period. The mean age of patients were 32.8 years and male to female ratio was 1:2. Sixteen patients (32%) had single to multiple strictures involving distal ileum followed by ileocaecal mass (26%). Eleven patients (22%) were observed with mesenteric lymphadenopathy. Three patients (6%) were observed with tuberculous perforation. Postoperative complications were mild in all patients except in 10 patients (20%) where serious complications like anastomotic leak and sepsis was observed. Overall mortality was observed in 5 patients (10%).

**Conclusion:** Patients who present with bowel obstruction especially sub-acute or chronic, should have complete workup to prove or rule out intestinal tuberculosis. The aim of surgery in case of abdominal tuberculosis is to overcome the deleterious effects of the diseased tissue disorganization, obstruction and perforation. Conservative approach in performing resection with or without anastomosis is more logical and rational procedure for abdominal tuberculosis.

**Keywords:** Abdominal tuberculosis, presentation, bowel obstruction, conservative resection.

## INTRODUCTION

Tuberculosis is a life-threatening disease which can virtually affect any organ system.<sup>1</sup> The primary site of tuberculosis is usually lung but among extra pulmonary tuberculosis, abdominal tuberculosis cases are on rise. The diagnosis of extra pulmonary tuberculosis is usually difficult and late as it presents with non-specific clinical and radiological features. Tuberculosis has been called a great mimic, particularly so in the abdomen, where its manifestation can resemble a variety of diseases.<sup>2</sup>

Clinically, abdominal tuberculosis may present as an acute abdomen, either due to obstruction of bowel, perforation or mass in right lower abdomen mimic appendicular mass or acute appendicitis.<sup>3</sup> Despite advances in diagnostic facilities and drug therapy, tuberculosis remains a major health problem in the developing world especially Indian subcontinent and Africa.

The present study was carried out with aim to evaluate the various clinical presentations of abdominal tuberculosis, its incidence, diagnosis and various methods of management

including the surgical procedures.

## MATERIAL AND METHODS

The present study included observation on 50 patients of abdominal tuberculosis in surgical unit of Rajendra Institute of Medical Sciences, Ranchi, Jharkhand, India from January 2013 to December 2015 after obtaining approval from Institutional Ethics Committee and written informed consent. Patients were selected on the basis of signs and symptoms, clinical suspicion, routine and specialized investigations, radiological findings, demonstration of AFB, laparotomy and all cases were finally confirmed by histopathological examination. Patients with normal chest X-rays, but signs and symptoms of abdominal tuberculosis were considered to have primary abdominal tuberculosis. Out of 50 patients, 45 underwent exploratory laparotomy after resuscitation & baseline investigations and 5 patients were managed conservatively.

Specimens of all patients were subjected to histopathological examination for confirmation of diagnosis. Antitubercular drugs were given to all patients postoperatively for one year.

## STATISTICAL ANALYSIS

Microsoft office 2007 was used for the statistical analysis. Mean and SD were used for results interpretation.

## RESULTS

The age range of patients with abdominal tuberculosis was 10-70 years but maximum number (60%) of patients was between 21-40 years age group. The male to female ratio was 1:2. Majority of the patients were from low socioeconomic group. USG was performed in 6 patients out of which 4 (66.7%) had presence of lump at right lower abdomen. Twenty eight (56%) patients presented with signs and symptoms of acute or sub-acute intestinal obstruction (Tables 1 and 2). Out of 50 patients, 17 (34%) had primary tuberculosis with remarkable chest X-ray and 33 (66%) had secondary intestinal tuberculosis. The duration of symptoms prior to admission varied between 3 days to 3 years. Majority of patients were anaemic and deficit in electrolytes. ESR was raised in 45 (90%) patients.

Pain X-ray abdomen was done in 40 patients out of which 9 patients (22.5%) had multiple air-fluid levels, 4 (10%) had gas under diaphragm and 4 (10%) showed calcified mesenteric

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lymph nodes. Thirty five patients were subjected to Barium meal follow through X-ray which revealed one or more of the features like dilatation and stasis, filling defect and pulled up caecum.

The most common area of involvement was ileum & jejunum in 18 (36%) patients followed by ileocaecal region in 13 (26%). Mesenteric lymphadenitis was present in 11 (22%) patients.

The stricture type of lesion was the commonest i.e. in 15 (30%). Hyperplastic lesion and tuberculous lymphadenitis was present in about one-fourth patients. Ulcerative lesion was recognized in only 12% of patients (Table 3).

In majority of patients (24%) only laparotomy and biopsy was done. Stricturoplasty was done in 12% patients, bypass surgery in 12%, right hemicolectomy in 10% patients, conservative ileocaecal resection in 8% patients and antero anastomosis done in 10% patients. (Table 4)

Postoperative complications were noted in the form of wound sepsis in 9 patients (20%), diarrhoea and loose motion in 8 patients (17.8%) and gaping of wound in 4 patients (8.8%).

The mortality was recorded in 5 patients (10%). The cause of death was severe sepsis and multi-organ failure. Out of 50 patients, 43 (86%) were doing well during follow up of 6 months and after one year only two patients having the persistence of symptoms.

## DISCUSSION

Abdominal tuberculosis is the third most common extra pulmonary site of tuberculosis, following the tuberculosis of lymph node and spine.<sup>4,6</sup> Abdominal tuberculosis can occur at any age, but most commonly prevalent in young age. The mean age of incidence was 32.8 years in the present study which is in accordance other studies.<sup>3,7</sup> Majority of the patients in our series belonged to low socioeconomic class which is also reported by other authors.<sup>8,9</sup> Poor housing, overcrowding and malnutrition are contributors of his disease in low socioeconomic class people. Other contributory factors which made poor people more prone to the disease are lack of education, lack of early treatment, eating and drinking from common vessels and poor pasteurization of milk. Preoperative diagnosis of this disease is difficult. Laparoscopy and high index of clinical suspicion help to establish the diagnosis. In the present series, most of the patients required urgent surgical intervention (90%). In our study, 92% of patients had abdominal pain (Table 1). Majority of patients had intestinal obstruction with signs of abdominal distension (56%), visible peristalsis (24%), Borborygmi (24%), abdominal lump (38%) (Table 2). High incidence of disease in the females has been found in our study. This has been also reported in many studies.<sup>8,10</sup>

Most common cause of intestinal obstruction was found to be single or multiple stricture of distal ileum (32%) followed by ileocaecal mass (26%). Eleven patients (22%) were observed with mesenteric lymphadenopathy. Three patients (6%) were observed with tuberculous perforation. Bhansali and Desai observed small bowel involvement in 63.2% cases in their series.<sup>11</sup>

Types of surgical operations in our study includes stricturoplasty (12%), bypass surgery (12%), resection and entero anastomosis (10%), right hemicolectomy (10%), conservative ileocaecal resection (8%) and simple closure of perforation (8%) (Table 4).

Symptoms	No. of patients	Percentage
Pain abdomen	46	92
Vomiting	30	60
Guarding	10	20
Constipation	20	40
Diarrhoea	5	10
Irregular bowel habit	6	12
Fever	16	32
Loss of weight	27	54
Loss of appetite	26	52
Abdominal distension	28	56
Abdominal lump	14	28
Discomfort after meal	12	30
Oligomenorrhoea	12	24
Cough	5	10

**Table-1:** Presenting complaints (Symptoms) of the patients

Signs	No. of patients	Percentage
Abdominal distension	28	56
Tenderness	40	80
Guarding	8	16
Visible peristalsis	12	24
Abdominal lump	19	38
Doughy feeling of abdomen	14	28
Ascites	15	30
Borborygmi	12	24

**Table-2:** Clinical signs of the patients

Types of lesion	No. of patients	Percentage
Stricture	15	30
Hyperplastic	12	24
Ulcerative lesion	6	12
Tuberculous perforation	3	6
Tuberculous lymphadenitis	11	22
Stricture with omental cake	1	2
Miliary tuberculosis of abdomen	4	8
Plastering of intestine and peritoneum	4	8
Pelvic organ (Fallopian tube)	1	2

**Table-3:** Different types of tuberculous lesion

Name of operation	No. of patients	Percentage
Right hemicolectomy	5	10
Conservative ileocaecal resection	4	8
Stricturoplasty	6	12
Resection and entero anastomosis	5	10
Bypass surgery	6	12
Simple closure of perforation	4	8
Laparotomy and biopsy	12	24
Peritoneal tapping	1	2
Laparotomy and drain only	1	2
Salpingo oophorectomy	1	2

**Table-4:** Different types of operation done

Overall result of present series was quite good. Out of 50 patients studied, postoperative complications were mild except in 10 patients (20%) where serious complications like anastomotic leak and sepsis was observed. In 8.8% patients there were gaping of wound. Stitch abscess was observed in 8.8% patients.

In 4.4% patients features of pulmonary complications were observed. Overall mortality was observed in 5 patients (10%). In the present study anti-tuberculous drugs were prescribed to all patients for a period of 12 months as most the series recommended.<sup>12</sup>

## CONCLUSION

In conclusion, tuberculosis is essentially a systemic disorder. The resection, however extensive cannot eradicate the entire disease from the body. The aim of surgery in case of abdominal tuberculosis is to overcome the deleterious effects of the diseased tissue disorganization, obstruction and perforation. Conservative approach in performing resection is more logical and rational procedure for abdominal tuberculosis.

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