

## ORIGINAL ARTICLE

# Mode of presentation of abdominal tuberculosis

SM Hossain<sup>1</sup>, MM Rahman<sup>2</sup>, SA Hossain<sup>3</sup>, SFU Ahmed<sup>4</sup>

### Abstract

This study included 32 female and 20 male patients. Varied presentation of abdominal tuberculosis included pain in abdomen (95%), fever (84.6%), weight loss (88%) and mass in abdomen. Laparoscopic and open adhesiolysis (18.75%) resection and anastomosis (12.5%), stricturoplasty (12.5%), loop ileostomy (25%), closure of perforation (18.75%) and limited right hemicolectomy (12.5%) were the procedures carried out. Two patients expired with a mortality rate of 4%. The diagnosis of abdominal tuberculosis is difficult due to lack of specific signs and symptoms. However predetermined clinical assessment can be readily applied for earlier diagnosis. Surgical exploration is reserved for equivocal cases and for those who present as emergencies.

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### Introduction:

Tuberculosis (TB) is a global disease. WHO in 2007 estimated that nearly 2 billion people, constituting one third of world's population are infected with tuberculosis. TB kills over 5000 people every day and nearly 2 million every year. TB affects the poorest and marginalized population, breaks the social fabric and undermines the gains of global economic development.

### Methodology:

This retrospective study was carried out at Khulna Medical College Hospital and Habigonj General Hospital, Habigonj from January 1999 to December 2009. All patients with abdominal tuberculosis were included. Diagnosis was based on history, physical examination and investigations. Investigations included blood CP, ESR, Montoux test, Laparoscopic biopsy, PCR in selected cases. X-ray chest and abdomen, U/S and barium meal follow through in selected cases. Patients who presented with signs and symptoms of Obstruction or peritonitis were explored. During exploration, we observed type of abdominal TB, extent of disease, presence or absence of ascites, lymph node involvement, type of gut involved, number of strictures, number of perforations. Surgical procedures included resection anastomosis, adhesiolysis and stricturoplasty, primary repair of perforation, ileostomy and exteriorization of gut. In all cases histopathological examination of resected specimen or mesenteric Lymph nodes was performed in patients who underwent surgery.

### Results:

In this study of 52 patients, 20 were male and 32 were female. Male to female ratio is 5:8. The age range was between 14-66 years and mean age was 33 years. Common presenting signs and symptoms included

abdominal pain, weight loss, vomiting, fever, abdominal distension, diarrhoea, constipation, abdominal tenderness (peritonitis), ascites and abdominal mass. Detailed clinical presentation of these cases is reflected in Table I.

**Table I**  
Clinical presentation of abdominal tuberculosis. (n=52)

Features	Number	Percentage
Abdominal pain	50	95
Vomiting	40	76.9
Fever	44	84.6
Weight loss	46	88
Diarrhoea	12	23
Constipation	4	7.6
Abdominal tenderness	38	73
Ascities	14	26.9
Abdominal mass	24	46.1
Peritonitis	16	30.7

In this study, the investigations revealed anaemia in 48 cases (92.3%), raised ESR in 32 cases (61.5%), reactive Montoux in 16 out of 24 cases tested. Ascitic fluid study was done in 14 patients who had exudative type. Barium meal and follow through was done in 20 cases and 14(70%) patients revealed lesions suggestive of TB. Diagnostic laparoscopy was done in 8 cases and tubercles were present in all these cases. X-ray chest revealed associated pulmonary TB in 12 patients. 20 patients were managed conservatively with anti-tuberculous chemotherapy while surgical treatment was done in 32 patients (61.5%) followed by anti-tuberculous chemotherapy. Table II shows various surgical procedures done.

1. Syed Mozammel Hossain FCPS. Assistant Professor, Department of Surgery, Khulna Medical College.
2. Md. Mostafizur Rahman FCPS. (Consultant, Surgery, Habigonj Sadar Hospital.
3. Shaikh Amir Hossain FCPS. Associate Professor, Department of Medicine, Khulna Medical College.
4. Sk. Farid Uddin Ahmed DA. Junior Consultant, Department of Anaesthesiology, Khulna Medical College Hospital.

**Table II**  
Surgical procedure in operated cases

Operation	Number	Percentage
Adhesiolysis+Biopsy	6	18.75
Resection-anastomosis	4	12.50
Stricturoplasty	4	12.50
Loop ileostomy	8	25.00
Closure of perforation	6	18.75
Limited right hemicolectomy	4	12.50

Histopathological examination of mesenteric lymph nodes or resected gut was done in all 32 cases for confirmation of tuberculosis. Distal ileum was the commonest site followed by ileo-cecal region and jejunum. Eight patients (15.38%) out of 52 died. Out of them 6 (75%) presented in emergency with peritonitis and 2 (25%) had miliary TB.

### Discussion:

Now a days abdominal tuberculosis is rare in the developed world but this was not always the case. At the beginning of the 20th century, intestinal tuberculosis was the most common cause of small intestine obstruction and stricture.<sup>9</sup>

The prevalence of this pathology dramatically fell due to improved life style, pasteurization of milk (leading to decreased frequency of Mycobacterium bovis infection) and control of bovine tuberculosis. This has also been the case in Greece during the second half of the last century, resulting in the closure of most special anti-TB hospital.

The awareness of clinical presentation of abdominal tuberculosis shortens its diagnostic time and improves its management.<sup>11</sup> Abdomen is one of the common site of extra-pulmonary TB and its incidence is increasing.<sup>11,12</sup> Abdominal TB is more common in females as evident from present study and other studies as well.<sup>13</sup> This can be explained by the fact that females are more neglected and malnourished in our population. The incidence of associated pulmonary TB is variable. It is 23% in our study as compared to 21% by Tariq et. al.<sup>14</sup>

In general surgical intervention is not necessary for successful treatment. Medical management with a 4 drug regimen is the initial treatment of choice. Symptoms usually begin to improve after 1-2 weeks of therapy. Occasionally patients present with complication from their disease such as perforation, obstruction, fistula formation and massive bleeding and some of those complications do require immediate surgical intervention. Anand et al evaluated 39 patients of abdominal tuberculosis with symptoms and radiological evidence of bowel obstruction. All patients were medically managed.<sup>10</sup>

In this study, patients with abdominal tuberculosis presented with fever (84.6%), abdominal pain (88.4%), vomiting (76.9%), weight loss (69.2%), mass in right iliac fossa (46.1%). Twenty patients were managed by conservative treatment (42.5%), while surgical intervention was done in 32 patients. Sircar et al<sup>15</sup> described that 79% patients managed conservatively and 21% patients needed surgical intervention. Terminal ileum was most commonly involved (60%) followed by ileo-caecal junction (30%). This contradicts other studies,<sup>16</sup> which showed ileo-caecal region (39%) and terminal ileum (16%). Mortality was 15.38% in the present study while Baluck et al has zero mortality. Lingen felsen et al showed a mortality of 7.3% and Dandapat et al found a postoperative mortality of 6.4%.<sup>17</sup>

### Conclusion:

Abdominal tuberculosis is one of the common problem and its clinical manifestations mimic with many of the chronic abdominal conditions. So there remains diagnostic dilemma. Both physician and surgeon have a contributing role in early diagnosis and treatment which may reduce the morbidity and mortality of abdominal tuberculosis.

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