

A Study of Abdominal tuberculosis in North Indian Patients

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Research Article

Article Info:

Received on: 14/05/2016
Published on: 27/06/2016



QR Code for mobile

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ABSTRACT :

Abdominal tuberculosis is defined as infection of the peritoneum, hollow or solid abdominal organs with *Mycobacterium tuberculi*. The peritoneum and the ileocaecal region are the most likely sites of infection and are involved in the majority of the cases by hematogenous spread or through swallowing of infected sputum from primary pulmonary tuberculosis. The 40 patients were enrolled in to the study. The age group of the patients are from 20-50 years. The patients visited to Out Patient Department (OPD) and in-patient department (IPD) of a tertiary care hospital in North India were considered in the study. All patients, where diagnosis of tuberculosis was confirmed, received three-drug anti-tubercular regimen. There was no post-operative mortality. In spite of specific anti tuberculosis drugs and vast measures against the disease, including chemoprophylaxis and pasteurisation abdominal tuberculosis remains a fairly common disease even today. Young adults between 20-40 years are the most commonly affected.

Keywords: Abdominal tuberculosis, Intestinal obstruction.

INTRODUCTION:

Tuberculosis (TB) can involve any part of the gastrointestinal tract from mouth to anus, the peritoneum and the pancreatobiliary system. It can have a varied presentation, frequently mimicking other common and rare diseases. The clinician must look for tuberculosis, and confirm or exclude this treatable malady in any patient who presents with gastrointestinal disease.

TB of the gastro intestinal tract (digestive system) and abdominal cavity is known as abdominal tuberculosis. Ingestion of the tuberculous germ by drinking unpasteurised milk of a cow infected with TB is one of the mechanisms of abdominal TB. Abdominal TB can also occur by spread of the TB bacillus from the lungs to the intestines by the blood stream. In 2/3 rd of children, there is predominant involvement of the digestive system. Involvement of the abdominal cavity (peritoneum) occurs in remaining of the patients. Involvement of only the lymph glands in the abdomen is rare. Clinical feature of abdominal tuberculosis is varied. The most common symptoms are pain in the abdomen, loss of weight, anorexia, recurrent diarrhea, low grade fever, cough and distension of abdomen.

The doctor on examination may feel a lump, fluid in the abdomen or a doughy feel of the abdomen. Also there may be enlarged lymph glands elsewhere in the body.

Diagnosis can be confirmed by isolating the TB germ from the digestive system by either a biopsy or endoscopy. However, other supportive tests that may be done are the Mantoux test, Chest X-Ray, Abdominal X-Rays (with or without barium) and scans such as ultrasound and CT scan. Untreated TB of the intestine may lead to intestinal obstruction, fistula or even abscess and perforation with

resultant peritonitis. Abdominal TB needs to be treated with at least 3-4 anti TB drugs for the initial 2 months and subsequently 2 anti TB drugs for at least 7-10 months.

The commonly used drugs during the initial 2 months therapy (intensification phase) are Isoniazid (INH), Rifampicin, Ethambutol and Pyrazinamide. During the next 7-10 months (continuation phase) 2 the drugs commonly used are INH and Rifampicin. Surgery is required whenever there is perforation, abscess or fistula formation.

The postulated mechanisms by which the tubercule bacilli reach the gastrointestinal tract are:

- (i) hematogenous spread from the primary lung focus in childhood, with later reactivation;
- (ii) ingestion of bacilli in sputum from active pulmonary focus;
- (iii) direct spread from adjacent organs; and
- (iv) through lymph channels from infected nodes.

The most common site of involvement is the ileocaecal region, possibly because of the increased physiological stasis, increased rate of fluid and electrolyte absorption, minimal digestive activity and an abundance of lymphoid tissue at this site. It has been shown that the M cells associated with Peyer's patches can phagocytose BCG bacillus.

Materials & Methodology:

All the patients are informed consents. The 40 patients were enrolled in to the study. The age group of the patients are from 20-50 years. The patients visited to Out Patient Department (OPD) and in-patient department (IPD) of a tertiary care hospital in North India were considered in the study. All the patient's clinical history were collected. Also the complete physical examination was done.

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Conflict of interest: Authors reported none

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Two groups of the patients is considered for the study.

Group A: Acute Symptom Patients:

This group of the patients showed the acute symptoms like: pain, vomiting, constipation affecting intestinal obstruction/perforation needing urgent surgical involvement. In this study group diagnosis was done by operative findings and histopathological biopsy of tissue.

Group B: Chronic Symptoms Patients:

This group of the patients having symptoms like pain, fever, lump and abdominal distension. The diagnosis of this group patients is done by the haemogram, sputum analysis, x-ray of abdomen, ultrasonography. If there is uncertain about the diagnostic findings then surgical interventions was done.

After confirmation of the diagnosis all patients were prescribed anti TB treatment for period of 9 months to 18 months.

Results & Discussion:

Following are the observation in the enrolled study group patients.

Table 1 : Number of patients & Symptoms

Symptoms	Percentage
Fever	50
Weight loss	65
Anorexia	55
Abdominal pain	80
Vomiting	70
Abdominal distension	50
Constipation	40
Diarrhoea	15
Lump abdomen	60

Table 2 : Abdominal TB patients signs

Sign	Percentage
Pallor	82
Lymphadenopathy	18
Fever	42
Chest Sign	28
Distension of Abdomen	45
Abdominal tenderness	82
Lump abdomen	58
Ascites	10

Duration of symptoms in present study varied from: 2 days to 3 years and majority of our patients had symptom; of more than 6 months duration at the time of presentation. Past history of pulmonary tuberculosis, positive in only 6 patients (20 per cent). Out of these. 4 patients were on treatment with ATI while one had already taken a complete course of anti TB drugs. Significant extra-abdominal lymphadenopathy was recorded in 18 percent of the patients and in that majority of them only cervical lymph glands were involved, whereas one patient had in addition, involvement of axillary lymph nodes. Most of the patients were anaemic (93.3 percent) with ESR more than 20 mm in 1st hr. (by Westergren's method). Radiography of the chest showed evidence of healed or active pulmonary tuberculosis in 23.3 per cent of patients.

Plain radiography of the abdomen revealed multiple dilated loops of small gut with significant gas-fluid levels in erect films in 9 patients. Free air under the right dome of diaphragm was seen in once patient whereas in two patients, there was radiological evidence of ascites.

Table 3: Indication

Diagnosis	No. of Patients
Intestinal Obstruction	7
Suspected lump abdomen	3
Peritonitis	2
Carcinoma colon	2
Stricture colon	-
Chronic cholecystitis with cholelithiasis	1
Totak	15

In the complete study group the Intestinal Obstruction is seen in 7 patients. Suspected lump abdomen was observed in 3 patients. Peritonitis and Carcinoma colon is seen in 2 patients each. Chronic cholecystitis with cholelithiasis is seen only in 1 patients.

Table 4 : Lesion Distribution in Abdominal Tuberculosis.

Site	No. of Patients
Peritoneum	4
Small intestine	6
Small & large intestine	3
Large intestine only	2
Abdominal lymph nodes	7
Multiple lesions	5

Incidental evidence of tuberculosis was found in one patient being operated for gall-stones. Postoperative complications were seen in five patients requiring no surgical intervention and were managed conservatively. The site-wise distribution of disease is shown in table 4.

Conclusion:

Tuberculosis can involve any part of the gastrointestinal tract and is the sixth most frequent site of extrapulmonary involvement. Both the incidence and severity of abdominal tuberculosis are expected to increase with increasing incidence of HIV infection. Tuberculosis bacteria reach the gastrointestinal tract via haematogenous spread, ingestion of infected sputum, or direct spread from infected contiguous lymph nodes and fallopian tubes. The gross pathology is characterized by transverse ulcers, fibrosis, thickening and structuring of the bowel wall, enlarged and matted mesenteric lymph nodes, ligmental thickening, and peritoneal tubercles.

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