



RETROSPECTIVE STUDY OF ABDOMINAL TUBERCULOSIS CASES IN TERTIARY CARE CENTER IN MUMBAI

General Surgery

Dr. Prashant Dinkar Pawar

Assistant Professor, Department of General Surgery, Rajiv Gandhi Medical college , Chhatrapati Shivaji Maharaj Hospital, Thane Belapur road, Kalwa, Thane, MS (400605) India

Dr. VN Shrikhande

Ex. HOD & Professor, Department of General Surgery, Bombay Hospital, Mumbai. MS, India.

***Dr. Pavan Sable**

Assistant Professor, Department of Community Medicine, Seth G.S. Medical College & K.E.M. Hospital, Mumbai, MS (400012) India *Corresponding Author

Dr. Milind Ubale

Associate professor, Department of Microbiology, Rajiv Gandhi Medical college, Chhatrapati Shivaji Maharaj Hospital, Thane Belapur road, Kalwa, Thane, MS (400605) India

ABSTRACT

Aim: To study the diagnostic and clinical features of Abdominal Tuberculosis cases in Tertiary care center in Mumbai

Study Design: Hospital based Retrospective Observational study

Methodology: The Abdominal Tuberculosis patients, who registered at in Tertiary care center in Mumbai were included in the study. All the cases of Abdominal Tuberculosis, which were diagnosed histopathologically, were studied. (N = 25). The cases included emergency as well as nonemergency cases.

Exclusion Criteria: The Genitourinary cases, solid organ Tuberculosis cases like liver, spleen, etc. and Paediatric cases were not included in the present study.

Results: The most common age group was 20-30 years (56%). The disease was more common in males (64%). Out of the total 25 cases, only 2 had emergency presentation. The common symptoms at presentation were: Abdominal pain, anorexia, weight loss, and nausea and vomiting. Among the total 25 cases, 14 cases had Intestinal Tuberculosis (56%). The medical line of treatment was needed for 18 cases (72%), Surgery was done in 7 cases (28%).

Conclusions: Abdominal Tuberculosis is common medical condition; it responds well to medical and surgical line of treatment.

KEYWORDS

Abdominal Tuberculosis, EPTB, Stricturoplasty

Introduction

Tuberculosis (TB) remains one of the leading infectious diseases causing significant morbidity and mortality worldwide. TB is a multisystem disease with varied presentations and manifestations; it can affect any organ or tissue. One third of the world's population is latently infected with *Mycobacterium tuberculosis*¹, of which about 10% may develop active disease at anytime². Although the infection of *M. tuberculosis* usually results in pulmonary TB, other organs and tissues can also be affected, resulting in extrapulmonary or disseminated TB^{3,4,5}.

Extrapulmonary TB (EPTB) is a significant health problem, as is pulmonary TB (PTB), in both developing and developed countries⁶. In 2011, 14% of all cases of TB reported to the World Health Organization (WHO) were extra-pulmonary TB (EPTB)⁷.

In India, while 15-20 percent of the adult TB cases were EPTB, the rate of EPTB was increased to more than 50% among the HIV co-infected patients⁸. The reported proportions of EPTB among all TB cases in other developed countries ranged from 12% to 28.5%⁹⁻¹³. Considering lower voluntary reporting, diagnostic difficulty of EPTB, and missed cases, it is likely that actual proportion of EPTB was much higher than reported¹⁴.

Abdominal Tuberculosis is common in India; the dilemma in diagnosis and treatment and its varied presentation and complications is a real challenge to clinicians.

Material and methods

Study type and design: Hospital based Retrospective Observational study

Study setting: The present study was carried out Tertiary care setting in Mumbai City.

Study population: The Abdominal Tuberculosis patients, who registered at in Tertiary care center in Mumbai were included in the study.

Study tools: The information of the Abdominal Tuberculosis patients is taken from Hospital records.

Inclusion criteria: All the cases of Abdominal Tuberculosis, which were diagnosed histopathologically, were studied. The cases included emergency as well as nonemergency cases.

Exclusion criteria: The Genitourinary cases, solid organ Tuberculosis cases like liver, spleen, etc as well as Paediatric cases were not included in the present study.

Sample size: The total cases of Abdominal Tuberculosis enrolled for the present study is 25 (N=25).

Sampling technique: Convenient sampling technique

Study variables: The variables included in the present study were – Demographic information, clinical presentation, laboratory investigations and treatment modalities.

Data entry and analysis: The data is first tabulated and frequency and percentage for categorical variables were calculated, using Microsoft excel.

Results Table 1

Age of the patients		
21 to 30 years	14	56%
31 to 40 years	8	32%
> 40 years	3	12%
Gender		
Male	16	64%
Female	9	36%
Presentation		
Chronic	23	92%
Emergency (Acute)	2	8%

Most of the patients belonged to the age group 21-30 Years (56%), followed by age group 31-40 Years (32%). Gender wise distribution showed that majority of the patients were male (64%). Out of the total 25 patients, 23 patients presented with chronic symptoms (92%), whereas, only 2 patients showed emergency (acute) presentation (8%).

Table 2

Symptoms of Abdominal Tuberculosis	No*	%
Abdominal Pain	24	96%
Anorexia	18	72%
Weight Loss	14	56%
Nausea	14	56%
Fever	13	52%
Abdominal Distension	12	48%
Vomiting	8	32%
Lump in Abdomen	6	24%

(*Not mutually exclusive)

Among the presenting symptoms, Abdominal pain was the commonest symptom (96%), followed by, anorexia (72%), weight loss (56%) and other symptoms.

Table 3

Type of Abdominal Tuberculosis	Gender		Total
	Male	Female	
Intestinal	9	5	14
Extra Intestinal	7	4	11
Total	16	9	25

Total 14 patients were diagnosed with Intestinal Tuberculosis, whereas, 11 patients were suffering from Extra Intestinal Tuberculosis.

Table 4

Type of Treatment	Gender		Total
	Male	Female	
Medical	14	4	18
Surgical	4	3	7
Total	18	7	25

Surgical treatment was considered in 7 patients, medical treatment was given in 18 patients. Out of the total 18 male patients, 14 were given medical treatment and 4 were considered for surgical treatment.

Table 5

Type of Surgical Treatment (N=7)	No	%
Strictureplasty	3	43%
Primary closure of perforation	1	14%
Small bowel to small bowel - End to end resection anastomosis	1	14%
Right hemicolectomy	2	29%

Surgical intervention was required in form of stricturoplasty, primary closure of perforation and resection anastomosis.

Discussion

Patients with extrapulmonary tuberculosis (EPTB), i.e., tuberculosis (TB) without associated lung involvement, usually receive less priority in national TB Programmes. However, in many countries, their numbers remain either stable or are increasing while numbers of patients with pulmonary disease are decreasing¹⁵. Extrapulmonary tuberculosis is likely a marker of underlying immune compromise. HIV infection is associated with an increased risk of extrapulmonary tuberculosis, and the risk increases as the CD4+ lymphocyte count declines¹⁶.

Young age, female gender, Asian and African origin, and human immunodeficiency virus (HIV) infection are independent risk factors for EPTB¹⁷.

In the present study, the common age group was 21-30 Years (56%), followed by age group 31-40 Years (32%). Gender wise distribution showed that majority of the patients were male (64%). The mean age reported in other studies^{18,19} is higher as compared to our study. The male:female ratio reported in some studies²⁰ is almost similar to our study.

In our study, Abdominal pain was the commonest symptom (96%), followed by, anorexia (72%), weight loss (56%) and other symptoms. Similar findings were also reported by other studies²¹.

Laparoscopy is the diagnostic procedure of choice and histology is needed for confirmation. Abdominal sonography and abdominal computed tomography were helpful for diagnosis, as reported by others²¹.

In the present study, about 75% of the patients were managed by medical therapy and surgery was needed in only in remaining cases. The available studies^{22,23} also reports the same findings.

Total 5 patients needed surgical intervention in the present study, in a form of - Strictureplasty, Primary closure of perforation, Small bowel to small bowel - End to end resection anastomosis and Right hemicolectomy

Several studies^{24,25} indicates that Stricture-plasty for cases with multiple strictures as a better technique than multiple resections and multiple enteroanastomoses, as it does not sacrifice any part of the small bowel and it avoids the occurrence of a 'blind loop' syndrome. In cases of bowel perforation the defect is closed, resection and anastomoses are performed for the distal stenosed part, in addition to peritoneal toilet and antituberculous therapy.

Conclusion

Abdominal tuberculosis is a common disease in India. It often poses diagnostic challenge, as the nonspecific features of the disease which may lead to delay in diagnosis and development of complications. Early diagnosis and initiation of drug therapy and surgical treatment are essential to prevent mortality. All patients with abdominal TB should receive a full course of antitubercular therapy. Most of the patients respond very well to standard drug therapy and surgery is required only in few cases.

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