



Clinical-Epidemiological Study of Abdominal Tuberculosis in A Tertiary Care Center in India

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Abstract

Tuberculosis is an infectious disease caused by mycobacterium tuberculosis. It commonly affects the lung but may involve extrapulmonary site. Abdominal TB is 6th commonest form of extrapulmonary involvement. As the clinical presentation of Abdominal TB is having a wide horizon of presentation, the diagnosis and treatment of Abdominal TB is challenge to the treating doctor. In this study, 101 cases diagnosed as abdominal TB admitted in tertiary care hospital during was studied to understand the clinical presentation, diagnosis and treatment response of the abdominal TB during the period May 2010- August 2012. The baseline characteristics and clinical data including diagnosis, investigations, treatment and outcome were analysed. Standardized treatment was given to all patients and difficulties encountered in their management were also noted.

Keywords: Abdominal TB, diagnosis, treatment.

Introduction

Tuberculosis caused by Mycobacterium tuberculosis is a disease of great antiquity and one of the greatest killer diseases of the mankind. Tuberculosis detected as far back as 10000 BC, still remain a major public health problem worldwide¹. According to WHO in 2011, there were estimated 8.7 million new cases of tuberculosis and 1.4 million people died from tuberculosis worldwide². India alone contributes 26% of this new TB cases. The incidence of TB cases which was on a steady decline since last 50 years, especially in the developed nations, has been increasing since early 1900s. This has been largely attributed to the emergency HIV epidemic, although MDR tuberculosis, neglect of control programs, immigration and other social changes

has been important factors³. Tuberculosis is a chronic granulomatous infectious disease, commonly affecting lungs and may involve other extrapulmonary site. Abdominal tuberculosis is 6th commonest form of extrapulmonary site. Its nonspecific and clinical manifestations cause intestinal tuberculosis to be confused with many other diseases especially Crohn's disease and intestinal neoplasms. There is no single feature which is diagnostic for abdominal tuberculosis. It continues to challenge the diagnostic acumen and therapeutic skills of the present day surgeon. The management of abdominal tuberculosis are still controversial. Surgical intervention which was frequently used in the past for diagnosis is not necessary and is reserved for complications such as obstruction, perforation, fistula, or a mass

which does not resolve with medical therapy⁴. In most cases a trial of medical therapy should be undertaken prior to surgical intervention⁵. However complications can be fatal and may occur after initiation of anti-tuberculous medications⁶. Many author advocate surgical management in intestinal obstruction due to TB as the obstructed lesion is often hypertrophic. This form according to many authors, often responds badly to medical management⁷. The surgical treatment of intestinal TB too has passed through many phases, from the bypass procedures of the pre-antibiotic era to the radical surgeries such as hemicolectomy and wide resection, followed by the more recent and more conservative, modified surgical procedures such as limited ileocecal resection, and stricturoplasties⁸. This study aims at a fresh look into abdominal TB and at a better understanding of its clinical manifestations, diagnostic modalities, management and its complications.

Methods and Materials

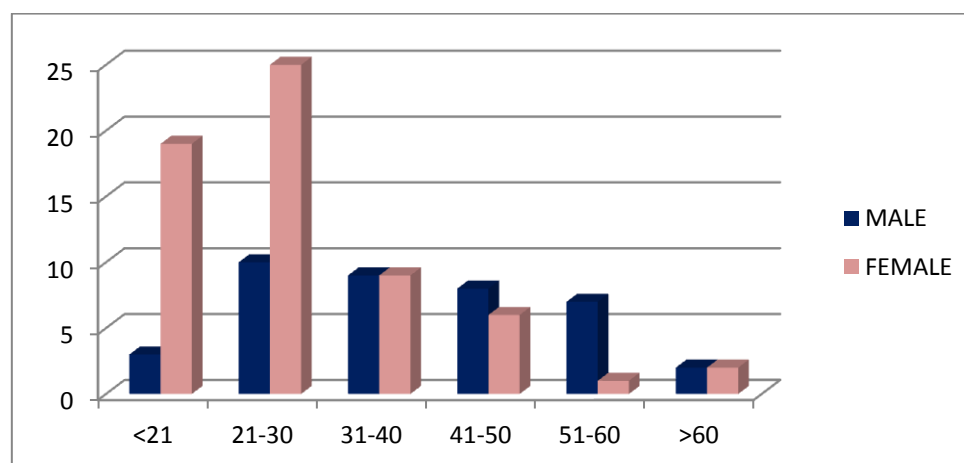
All patients suspected with Abdominal TB were admitted in a tertiary case centre Dhiraj Hospital, Baroda, India. Detail history, physical examination, routine blood investigations, special test are carried out to confirm the diagnosis. Following routine investigations are carried out: Hb test, CBC, LFT, RFT, Mantoux test, ESR, X ray chest(PA), X ray abdomen(erect), Sputum AFB. Following special investigations are done for doubtful diagnosis to confirm or support diagnosis:

1. Ascites fluid routine microscopy
2. Ascites fluid AFB staining
3. Ascites fluid ADA level
4. Ultrasound (abdomen + pelvis)
5. Computed tomography of abdomen and pelvis
6. Colonoscopy
7. BFMT
8. Biopsy

All patients were treated with 6 months short course scheme under DOTS. Surgeries were done in patients with complications of abdominal tuberculosis and were further assessed for operative procedures, intra operative findings, site of lesion, post-operative complications. After discharge patients were called for follow up after 2 and 6 months and were assessed for symptoms, post-operative complications, AKT treatment. In follow up patient completion of treatment, symptoms, delayed complication of surgical management like malabsorption evaluated.

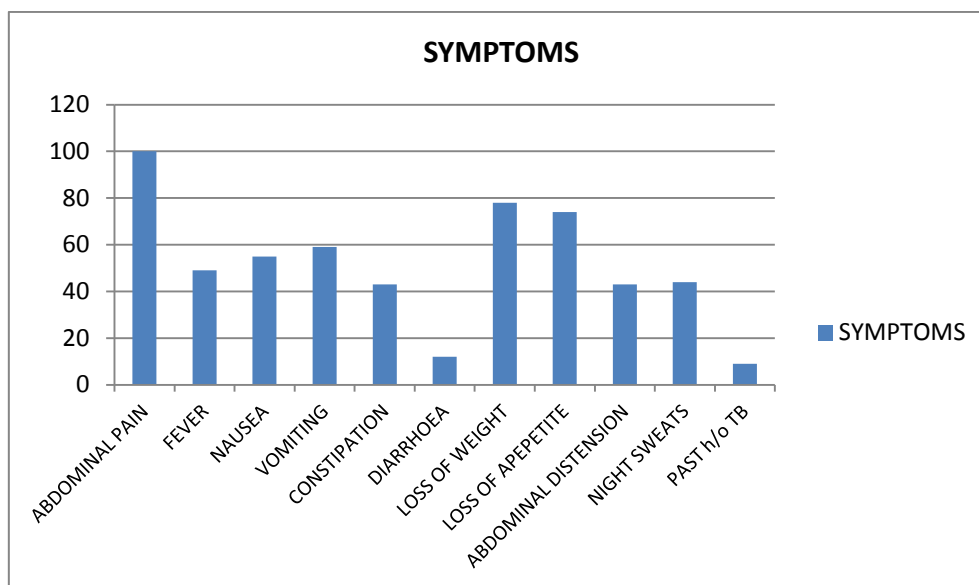
Result

1. In males as well as females maximum patients were observed in 21-30 years age group. In male second maximum patients observed in >60 years age group. In females second maximum patients observed in 11-21 years age group and least frequency observed in 51-60 years age group. Only 51-60 years age group male has more frequencies than female and in 31-40 years age group is equal.



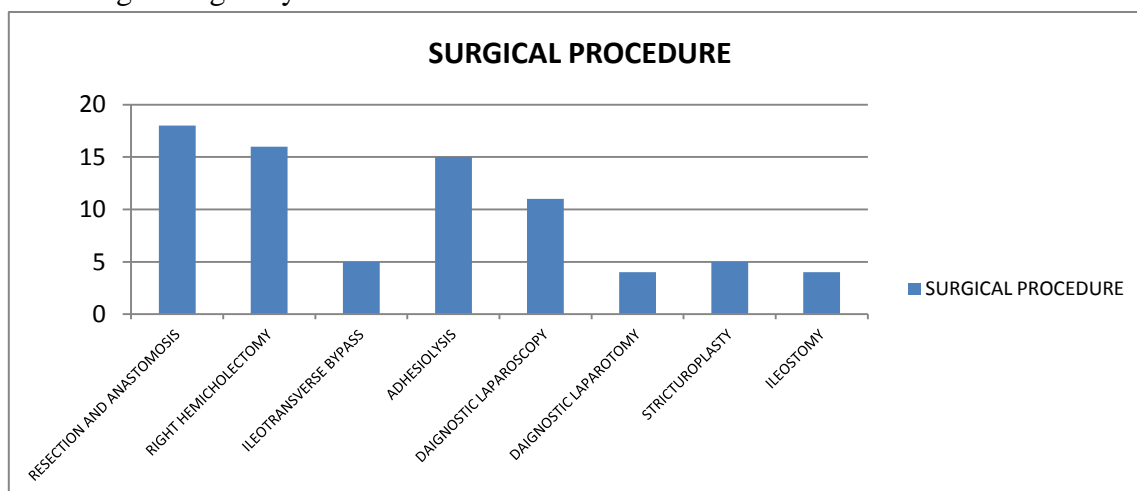
2. Out of 101 cases 5 were from upper socioeconomic status, 30 were from middle class and 66 were from lower socioeconomic status. Majority of patients were from lower socioeconomic class.
3. Abdominal pain was a major symptom seen in all patients. Second major

symptom was found to be loss of weight seen in 78% followed by loss of appetite seen in 74%. Appearance of other symptoms is represented in the graph below.



4. Most common clinical sign observed was pallor (68%) followed by abdominal tenderness (40%). Least observed clinical sign lymphadenopathy (18%). Other clinical signs were ascites (36%), lump in abdomen (25%), abdominal guarding (32%), abdominal rigidity (22%).
5. Out of 101 patients 34% patients were managed conservatively and 67% patients were managed surgically.

6. Resection and anastomosis was done in maximum number of patients (18%). Right hemicolectomy was done in 16% patients. Adhesiolysis, diagnostic laparoscopy, ileotransverse bypass and stricturoplasty were done in 15,11,5 and 5 patients. Least surgical procedures done were diagnostic laparotomy and ileostomy seen in 4 patients.



7. Ileocecal mass, most common operative finding was found in 21 patients. Strictures were found in 17 patients. Adhesion was found in 15 patients. Ascites was found in 12 patients. Enlarged mesenteric lymph nodes, perforations and military tubercle was found in 7, 6 and 5 patients respectively.
8. In post-operative patients, 8 patients developed wound infection. Septicaemia and anastomosis leak developed in 2 patients. Respiratory infections developed in 5 patients. One patient died post-operatively

Discussion

In our present study, majority of abdominal tuberculosis patients presented in 21-30 years and 11-20 years age groups were 34.65% and 21.78% respectively. Mean age was 31.77 +/- 13.745 years. Majority patients were females i.e. 62% while male were 39%. Male to female ratio is 1:1.59. Majority patients were from lower socioeconomic group. Most common complaint was abdominal pain, present in all patients. Abdominal pain followed by loss of weight was the second most common symptom. Most common sign was pallor seen in 67.33 patients. After pallor most common sign was abdominal tenderness seen in 39.60% patients. 66.34% patients were operated and 33.66% patients were managed conservatively. Resection and anastomosis was most common i.e. in 26.87% patients which was followed by right hemicolectomy in 23.88% patients. Adhesiolysis was done in 22.39% patients. Diagnostic laparoscopy was performed in 16.42% patients. Ileocaecal mass was most common finding in 32.84% patients. Adhesions were present in 22.39% of patients. Ascites, mesenteric lymph node, perforation and military tubercles present in 17.91%, 10.45%, 8.96% and 7.46% of patients. Most common site was intestine (60-39% patients) followed by peritoneum in 42% patients. Mesenteric lymph node and solid organ involved

in 7% and 6% patients respectively. Most common post-operative complication was wound infection in 11.94% patients. After wound infection common complication was respiratory infection which occurred in 2.99% patients. Death occurred in 1.49% patients. 100% patients follow up after 2 months and 80% patients after 6 months. In follow up 80% patients completed 6 months of AKT and 20% were on AKT. Nausea and vomiting occurred in 4% patients, 2% developed malabsorption. Rest all patients were asymptomatic. It was found that majority of abdominal TB patients presented in 21-30 years and 11-20 years age group were 34.65% and 21.78% respectively. Majority patients were females (62%) while 39% patients were male. Majority patients were from lower socioeconomic group. Most common complaint was abdominal pain followed by loss of weight and loss of appetite. Every case of abdominal TB was thoroughly investigated and managed accordingly.

Conclusion

Abdominal Tuberculosis is a common in developing countries and is potentially a fatal condition. The clinical presentation and diagnosis of Abdominal Tuberculosis is still a challenge to the physician despite of various modalities of diagnostic test available. Strong clinical suspicions, Ultra sonographic and computed tomography scan findings help establish a pre-operative diagnosis. Abdominal Tuberculosis has a strong prevalence in females. Surgery is the mainstay of treatment followed by Anti-tuberculous drugs.

Conflict of Interest

The Authors declare that they have no conflict of interests.

Acknowledgement: None

Authors' Contributions

All authors have equally contributed in designing of the study, data collecting, comparing the results with other publications and drafted manuscript.

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