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Original Research Article

Study of incidence and clinical presentation of tubercular abdominal emergencies

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ABSTRACT

Background: Tuberculosis is a common surgical problem in our community. Emergency surgery is usually required and surgical procedure depends upon the location and extent of the disease. Objective of the study was to determine the incidence of abdominal emergencies due to tuberculosis.
Methods: This observational study involved 300 patients with abdominal tuberculosis admitted either as a case of acute of subacute abdominal emergencies and tract in Lal Lajpath Rai hospital Kanpur, Uttar Pradesh, India, and associated hospitals. Data was entered into Excel worksheet and analyzed using SPSS version 16.0. Detailed data of each patient was entered on a Microsoft excel. Data were presented in number and percentages.
Results: The maximum number of cases were in third decade of life, age group 21-30. There were 120 males and 180 females. Male to female ratio was 1:1.5. Most of cases not having evidence of tuberculosis. History of pulmonary tuberculosis and abdominal tuberculosis were observed in 25% and 13% of the total cases. Abdominal pain was the commonest symptoms. Generalized pain was present in 136 cases and localized pain was present in 154 cases. 186 cases were presented as subacute intestinal obstruction and 114 cases patients were presented as acute abdomen.
Conclusions: Acute abdominal condition is one of the most frequent emergencies, early diagnosis with prompt treatment is essential for a promising prognosis.

Keywords: Emergency, Incidence, Surgery, Tuberculosis

INTRODUCTION

Tuberculosis is the most important infectious disease worldwide. About one third of the world population is infected and about three million die each year from this illness.[1] At the eighties, abdominal tuberculosis was largely limited to endemic regions in the countries of central and South Africa, South-East Asia and India. USA and in western European countries it was registered infrequently in individuals who spent some time in endemic regions.[2] Charles Dickens (1812-1870) has defined tuberculosis as "a dread disease in which struggle between soul and body is gradual quiet and solemn, that day by day, and grain by grain, the mortal part wastes and withers away." Tuberculosis is one of the top tenreasons of death, worldwide. In 2017, ten million people developed tuberculosis, with an assessed 1.3 million deaths.[3] Additionally, about one-quarter of the worldwide population has hidden tuberculosis infection.[4] Presently, the organization is even more multifaceted with the emerging of multi drug-resistant bacteria. Extra-pulmonary tuberculosis happens in about 20% of tuberculosis while abdominal tuberculosis found about 10% of extra-pulmonary tuberculosis.[5,6] There are three ways in which the tubercle bacilli can contaminate the abdomen: through ingestion of infected sputum or milk, through hematogenous or lymphatic feast and finally and through direct spread into the peritoneum from the fallopian tubes.[7] Surgery is done about 15% of the cases of abdominal tuberculosis; half of these are performed as

acute surgery including obstruction, perforation, hemorrhage or abscess formation with the other half as a diagnostic procedure.[8] Involvement of the abdomen is the sixth most common extra pulmonary site in the United States. It happens in up to 3.5% of cases of pulmonary TB and comprises (31-58) % of patients with abdominal TB.[9] It presents late with complications especially acute or sub-acute intestinal obstruction due to mass or stricture formation in small gut and ileocecal region or gut perforation leading to peritonitis.[10] It normally presents with abdominal pain, abdominal distension, diarrhea, vomiting, abdominal mass and constitutional indications like weight loss, fever, anorexia and night sweats. Variations of clinical presentations and lack of definite diagnostic investigations, early diagnosis of intestinal tuberculosis still a challenge for general surgeon.[11] This study was carried out to find the incidence of tuberculosis in cases of abdominal emergencies.

METHODS

The present study includes the cases of abdominal tuberculosis admitted either as a case of acute or subacute abdominal emergencies in Lal Lajpath Rai hospital Kanpur, Uttar Pradesh India, and associated hospitals. The total period of study was 10 years i.e., one year prospective (November 2017 to October 2018) and 9 years retrospective (October 2008 to October 2017).

Detailed history and complete physical examination investigations were carried out. Surgical treatment was performed in cases of obstruction or perforation. According to pre-operative findings one of the various surgical procedures was used;

- In case of hypertrophic type of ileocaecal tuberculosis right hemicolectomy with end to end ileotransverse anastomosis was done.
- Ileal resection with end-o-end anastomosis for multiple structures in a short segment of ileum was performed. Structure plastry was done if only one structure was found.
- Other types of procedures like division of bands and adhesions were performed, if these were the cause of obstruction.
- In few cases where bowel loops were found badly gummed up only biopsy taken and patients put antitubercular drugs post operatively.

In post-operative period the patient received full course of anti-tubercular drug viz. four drugs for three months streptomycin, Isoniazid, Rifampicin and Ethambutol according to weight of the patients, followed by two drugs for next six months and had a regular follow up. For retrograde study of nine years period the bed head tickets available in the record section of Lal Lajpath Rai hospital Kanpur, Uttar Pradesh India were observed.

Exclusion criteria

Patient who refuse to give their consent were excluded from the study.

Ethical approval

Ethical consent was sought from the Institute. Informed and written consent was obtained from each patient prior to commencement of the study.

Statistical analysis

Data was entered into Excel worksheet and analyzed using SPSS version 16 (Statistical Package for Social Sciences). Data were presented in number and percentages. Descriptive analysis was used to analyzed data.

RESULTS

A total number of 300 cases of abdominal tuberculosis were admitted either as a case of acute or subacute abdominal emergencies in Lal Lajpath Rai hospital Kanpur, Uttar Pradesh, India.

Table 1: Age and gender wise distribution of study subjects.

Age group (in years)	Male		Female		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
0-10	93	77.50	13	7.22	22	7.33
11-20	29	24.17	30	16.67	59	19.67
21-30	50	41.67	74	41.11	124	41.33
31-40	23	19.17	50	27.78	73	24.33
41-51	4	3.33	7	3.89	11	3.67
51-60	2	1.67	5	2.78	7	2.33
>61	3	2.50	1	0.56	4	1.33

The maximum number of cases were in third decade of life, age group 21-30, 124 cases (41.33%) followed by 73 cases (24.33%) in fourth decade of life. The youngest patients were 1.5 years old female and oldest patients was 80 years male. There were 120 males and 180 females. Male/female ratio was 1: 1.5 (Table 1).

Table 2: History of tuberculosis among subjects

History of tuberculosis	Number	Percentage
No evidence of tuberculosis	186	62
Pulmonary tuberculosis	75	25
Abdominal tuberculosis	39	39

Table 2 depicts that the history of tuberculosis, in which majority of cases showed no evidence of tuberculosis i.e., 62%. History of pulmonary tuberculosis was present in 25 % of the total cases. History of abdominal tuberculosis was present in only 13 % of the total cases (Table 2).

Table 3: Distribution symptoms shown in study subject.

Symptoms	Number	Percentage
Recurrent abdominal colic	290	96.67
Vomiting	150	50.00
Constipation with alternate diarrhea	129	43.00
Recurrent abdominal distension	84	28.00
Wind ball movement	97	32.33
Fever	73	24.33
Loss of weight	150	50.00
Anorexia	123	41.00
Menstrual irregularities	36	12.00
Vomiting distension of abdomen, pain and absolute constipation in combination	117	39.00

Abdominal pain was the commonest symptoms and was present in 290 patients (96.67). Generalized pain was present in 136 cases (45.53%) and localized pain was present in 154 cases (54.70%). Pain was colicky in nature in obstructive cases while diffused pain in perforation with peritonitis. Patients with acute abdomen usually having vomiting, 150 cases (50.00%). Fever was present in 73 cases (24.69%). It was usually low grade with evening rise tendency (Table 3).

Table 4: Clinical presentation of study subjects.

Clinical presentation	Number	Percentage
Subacute intestinal obstruction	186	62
Acute abdominal presentation		
Obstruction	90	78.95
Perforation	13	11.40
Peritonitis	5	4.39
Tabesmesenterica	3	2.63
Mimicking acute appendicitis	3	2.63

In present study of 300 patients 186 cases (62%) were presented as subacute intestinal obstruction and 114 cases (38%) patients were presented as acute abdomen. Out of these 90 were presented as acute intestinal obstruction. Most of these patients having obstruction at ileocecal junction. 13 patients were presented as perforation, perforation was usually secondary to obstruction either in the form of structures of bands. Five patients presented as peritonitis, 3 patients were presented as acute appendicitis (Table 4).

DISCUSSION

The incidence of abdominal tuberculosis in patients who required hospital admission was 0.42 of the total admissions in Lal Lajpath Rai hospital Kanpur, Uttar Pradesh India. It is lesser than the incidence of abdominal tuberculosis cases reported for the hospitals by Chuttani i.e., 0.8%. an incidence of 0.72% cases of abdominal tuberculosis in surgical wards was reported by Dandapat et al.[12,13] In this study females are more frequently affected than males. Male to female ratio in this study is, 1: 1.5. Female preponderance is present in most of the studies.[14-16] Intestinal and abdominal tuberculosis, like tuberculosis elsewhere in the body affects the young people at the peak of their productive life, this fact has serious impacts on the national economy and production, as working and productive class of community is replaced by sick and ill individuals. Seventy three percentages (73%) of the patients in our study were below 40 years. and 45.5% of the patients were between 20-40 years. This is agreeing with the results of other studies.[17] Maximum number of patients in this study are in third decade of life, i.e. in the age group of 21 to 30 years , which is 41.33% of the total cases. Cases between 11 to 90 years of the age are 70.99% and between 21 to 40 years are 65.66%. The results of this study are similar to those reported by other workers.[12,16,18] Lal et al reported tubercular enteric perforation in a 10 months old infant. In present study one female child of age 1.5 years presented with gum up mass with single perforation in ileum.[19] A history of pulmonary tuberculosis was observed in only 25% cases which indicate that majority of abdominal tuberculosis cases were primary in nature. The occurrence of abdominal tuberculosis secondary to pulmonary tuberculosis, prior to the wide spread use of antitubercular drug has been variously reported from 1 to 90%.[20] Ukil et al reported 51.1% of intestinal tuberculosis secondary to pulmonary disease.[21] Abdominal pain was the most common symptom and observed in 290 cases, 16.2% out of 300 cases. It is also comparable to the finding of other investigators.[14,22] Loss of weight and loss of appetite were observed in 50% and 41.77% of cases in this study , which is comparable to study performed by Singhal et al.[18]

CONCLUSION

Acute abdominal condition is one of the most common emergencies and acute abdominal tuberculosis is one of frequent causes of acute abdomen in endemic region as Intestinal tuberculosis is a common extra-pulmonary

appearance of tuberculosis. Early diagnosis is the key factor in avoid systemic and local complications of intestinal tuberculosis.

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