

Surgical Presentation of Abdominal Tuberculosis at a University Hospital

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ABSTRACT

Aim: To determine various surgical presentation of abdominal tuberculosis

Study design: cross sectional study

Place and duration: This study was conducted at Peoples University of Medical & Health Sciences for Women (PUMHS-W) Nawabshah Pakistan from October 2017 to march 2020.

Methodology: The data in this study were from cases of abdominal TB that were admitted as an acute or subacute abdominal emergency. The data of the patients were analyzed using SPSS version 22. Descriptive analysis was used to examine the data. The data was presented using numbers and percentages.

Results: Females made up 62.66 % of the 150 cases. A total of 55.33 % of the cases were between the ages of 30 and 50 years. No history of TB was shown in 60.66% of the cases and a history of pulmonary TB was found in 26.66 % of the cases. In 96.66% of patients, abdominal pain was present, followed by vomiting in 52 % and fever in 22 %. 60.66 percent of the cases were classified as having subacute intestinal obstruction, whereas 39.33 % had acute abdominal symptoms.

The most common symptom was abdominal pain, and the most common clinical presentation was subacute intestinal obstruction. Early identification is crucial for avoiding intestinal TB's systemic and local effects.

Conclusion: Intestinal obstruction was the most common clinical presentation of abdominal tuberculosis followed by intestinal obstruction. Acute abdominal TB is one of the most common causes of acute abdomen in endemic areas, as intestinal TB is a common extrapulmonary manifestation of TB. The key to avoiding systemic and local consequences of intestinal TB is early detection.

Keywords: Abdominal, Clinical presentation, Intestinal, Symptoms, Tuberculosis

INTRODUCTION

Tuberculosis (TB) is one of the world's top 10 causes of death. Ten million individuals contracted TB in 2017, with 1.3 million fatalities. (1) In addition, nearly a quarter of the world's population is infected with TB but is unaware of it. (1) With the emergence of multidrug-resistant bacteria, the organization has become even more complex. Extrapulmonary TB affects roughly 20% of TB cases (2), while abdominal TB affects 10% of extrapulmonary TB cases. (3) About 15% of cases with abdominal TB require surgery; half of these are for acute conditions such as blockage, perforation, bleeding, or abscess formation, while the other half is for diagnostic purposes. (4, 5)

In the United States, abdominal TB is the sixth most prevalent extrapulmonary TB. It affects up to 3.5 percent of patients with pulmonary TB and 31-58 percent of patients with abdominal TB. (6) It generally manifests with abdominal discomfort, weight loss, diarrhea, vomiting, night sweats, fever, anorexia, and abdominal distension. Early identification of intestinal TB remains difficult for general surgeons due to the variety of clinical manifestations and the lack of clear diagnostic procedures. (7)

In Pakistan, TB of the abdomen is a major public health hazard. A study reported that the prevalence of abdominal TB is 21 % among extrapulmonary TB. In children, its prevalence is 38.4 %, and in adults, it is 15.8%. (8) Patients with intestinal blockage present late due to vague symptoms that cause diagnostic delays. The most prevalent location of involvement is ileocecal TB. (1)

Despite advancements in diagnostic techniques, the identification of abdominal TB remains a challenge due to the non-specific, ambiguous clinical characteristics that characterize the disease in its early stages. This study aimed to determine the prevalence of symptoms and clinical presentation of abdominal TB.

METHODOLOGY

This study was conducted in our hospital. In this study, data of the cases of abdominal tuberculosis admitted as an acute or subacute abdominal emergency were included. Data of the patients from October 2017 to march 2020 were utilized. SPSS version 22 was

used to analyze the data. The data were evaluated using descriptive analysis. Numbers and percentages were used to present the data.

RESULTS

This study analyzed data from 150 cases of abdominal tuberculosis that were admitted as acute or subacute abdominal crises. Out of 150 patients, 62.66 % (n=94) were females. Most cases were found in 30 to 50 years of life (55.33%) and only 8% (n=12) were 12 years old or below. (As shown in Table 1) Table 2 shows the history of TB, with most patients (60.66%, n=91) showing no indication of TB. In 26.66 % (n=40) of the cases, a history of pulmonary TB was observed. Only 12.66 % (n=19) of the overall cases had a history of TB in the abdomen. The most prevalent symptom was abdominal pain, which was reported in 96.66% (n=145) cases. In obstructive cases, the pain was colicky, whereas the pain was diffuse in perforation with peritonitis. In 52% (n=78) cases, patients had vomiting. Fever was found in 22% (n=33) of the patients. (As shown in Table 3). In this study of 150 patients, 60.66% (n=91) cases were diagnosed with subacute intestinal obstruction, while 39.33% (n=59) cases were presented with the acute abdominal presentation. The acute intestinal obstruction was found in 77.96 % (n=46) of these cases. The ileocecal junction is obstructed in the majority of these patients. Perforation was seen in 10.16 % (n=6) of cases; perforation was mainly caused by an obstruction in the form of structures or bands. (A shown in Table 4).

Table 1: Demographics characteristics of the participants.

Variable	Number	Percentage
Total	150	100%
Gender		
Female	94	62.66
Male	56	37.33
Age Groups		
Up to 12 years	12	8
13 to 30	29	19.33
30 to 50	83	55.33
50 and above	26	17.33

Table 2: History of tuberculosis

History of TB	Number	Percentage
No evidence of TB	91	60.66
Pulmonary TB	40	26.66
Abdominal TB	19	12.66

Table 3: Symptoms of the patients

Symptoms	Number	Percentage
Recurrent abdominal colic	145	96.66
Vomiting	78	52
Constipation with alternate diarrhea	63	42
Recurrent abdominal distension	34	22.66
Wind ball movement	48	32
Fever	33	22
Loss of weight	82	54.66
Anorexia	65	43.33
Menstrual irregularities	11	7.33
Vomiting distension of abdomen, pain, and absolute constipation in combination	57	38

Table 4: Clinical presentation of the patients

Clinical Presentation	Number	Percentage
Subacute intestinal obstruction	91	60.66
Acute Abdominal Presentation	59	
Obstruction	46	77.96
Perforation	6	10.16
Peritonitis	3	5.08
Like Acute appendicitis	3	5.08
Tabes mesenterica	1	1.69

DISCUSSION

Pakistan is the fifth most heavily infected territory with tuberculosis (TB) on the global scale. It continues to be the most severe public health problem in the country. In Pakistan, the prevalence of TB is approximately 364 per 100,000 of the population. (9) TB can affect any body area, but the abdomen is the most prevalent place after the lungs. The ileum of the small bowel is most usually affected by TB, followed by the ileocecal region. Patients with large bowel TB may develop ulcers, strictures, perforation, and granuloma. (10)

Females were shown to be more affected than males in this study. The majority of research has a female preponderance. A recent study performed in Karachi, Pakistan, reported a higher prevalence of females. This study reported that out of 144 patients enrolled, 81 were females, and 63 were males, with a mean age of 45.94 ±9.19 years. (11) Other studies' results are also by the findings of our study (1, 8). However, in contrast to our study, a recent study reported a high male count. (12) Gender disparities have remained fluctuating. According to other studies, according to some authors, females are more likely to get the condition in underdeveloped nations, while males are more likely to have it in developed ones. However, no substantial reason for the gender disparity could be established.

Intestinal and abdominal TB, like TB elsewhere in the body, strikes people individuals at the peak of their productive years; this reality has far-reaching consequences for the country's economy and productivity, as sick and unwell individuals replace capable people. More than 80% of the patients in our study were under 50. This corresponds to the findings of other investigations. (1, 13)

In the current study, it was found that 26.66 % of the patients had a previous history of pulmonary TB, and 12.66 % of the patients reported a history of abdominal TB. This shows that majority of the patients with abdominal TB were primary. Studies have also emphasized that intestinal TB may be caused by pulmonary TB. (14) Before the widespread use of anti-tubercular drugs, the incidence of abdominal TB due to pulmonary TB has been reported to range from 1 to 90%. (15)

In the current study, recurrent abdominal colic was the most common symptom, and it was present in more than 90% of the patients. It's also similar to what other researchers have discovered. (1). Fever, abdominal pain, diarrhea, constipation,

weight loss, anorexia, and malaise are common non-specific symptoms. (16, 17) Our study findings are by the results of the previous studies.

Subacute intestinal obstruction is the most common clinical presentation we observed in the current study. Obstruction, perforation, peritonitis, etc., were other clinical symptoms. These symptoms were also reported in previous studies as well. (8, 16)

Despite advances in diagnostic methods, the diagnosis of abdominal TB remains a challenge due to the non-specific, ambiguous clinical characteristics that characterize the disease in its early stages.

CONCLUSION

Intestinal obstruction was the most common clinical presentation of abdominal tuberculosis followed by intestinal obstruction. Acute abdominal TB is one of the most common causes of acute abdomen in endemic areas, as intestinal TB is a common extrapulmonary manifestation of TB. The key to avoiding systemic and local consequences of intestinal TB is early detection.

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