ORIGINAL ARTICLE

TUBERCULOSIS AS A CAUSE OF SMALL BOWEL OBSTRUCTION IN ADULTS

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ABSTRACT

Background: Tuberculosis is a major health problem in developing countries. Abdomen is the next common site after lungs. The objective of this study was to know about the different patterns of abdominal tuberculosis presenting as small bowel obstruction in adults.

Material & Methods: This was a descriptive study carried out in Surgical Unit, Saidu Teaching Hospital, Saidu Sharif, Swat. Patients age >14 years operated for small bowel obstruction were included in this study.

Results: Among 193 patients with small bowel obstruction, in 42(21.76%) the cause of obstruction was tuberculosis. In these patients 20(47.61%) had adhesions and bands, 17(40.47%) strictures, 3(7.14%) ileocaecal mass and 2(4.76%) had adherent small bowel with enlarged mesenteric lymph nodes.

Conclusion: Tuberculosis is the leading cause of small bowel obstruction in our set up. The commonest modes of obstruction are bands, adhesions and strictures.

KEY WORDS: Small bowel obstruction, Abdominal tuberculosis, Tuberculosis.

INTRODUCTION

Tuberculosis is a communicable disease caused by Koch's bacillus discovered by Robert Koch in 1882. In developing countries it is a major health problem.[1-5] Approximately 95% of new cases and 98% of deaths occur in the under developed countries.[6] Malnutrition, unhygienic living, overcrowding and lack of adequate medical care are the factors favoring increased incidence of tuberculosis. It can affect any part of the body and abdomen is the next common site after lungs affected by the disease.[7] Abdominal lymph nodes, peritoneum, ileum and caecum are the most frequently affected structures.[8,9]

Intestinal tuberculosis is attributed to four mechanisms:[10,11] (i) Hematological spread from active pulmonary or miliary tuberculosis, (ii) Swallowing of infected sputum in patients with active pulmonary tuberculosis, (iii) Ingestion of contaminated milk or food, (iv) Contiguous spread from the adjacent organs.

The diagnosis of abdominal tuberculosis is often difficult and the majority of patients undergo surgery for confirmation of the diagnosis or for relief of obstruction.[12] Management of intestinal obstruction due to tuberculosis involves surgery and postoperative treatment with anti-tubercular therapy.[14]

The objective of this study was to know about the different types of abdominal tuberculosis presenting as small bowel obstruction in adults.

MATERIAL AND METHODS

This was a descriptive study carried out in Surgical Unit Saidu Teaching Hospital, Saidu Sharif, Swat, from February 2007 to January 2011.

Patients of both sexes having age >14 years who had small bowel obstruction were included in this study. They were operated and the diagnosis was confirmed by histopathology of the biopsy specimens. All these patients were admitted through casualty with signs and symptoms suggestive of small bowel obstruction. Every patient was examined and investigated i.e. full blood count, urea, electrolytes, blood sugar and creatanine where indicated were done. X-ray of the chest and x-ray and ultrasonography of abdomen were carried out. Patients were prepared for emergency surgery by nasogastric tube, IV fluids, broad spectrum antibiotics plus metronidazole and analgesics. The operative findings in all patients were recorded and the specimens taken were sent for histopathology.

Postoperatively the patients were closely monitored and the treatment continued in the form of nasogastric suction, IV antibiotics, and analgesics till full recovery. Nasogastric tube was removed on 4th or 5th postoperative day and the patients allowed orally. They were discharged when the condition was satisfactory. Final diagnosis was confirmed on receipt of histopathology reports. Patients with tuberculosis were given anti-tubercular therapy.

Table 1: Age and sex distribution of tubercular patients (n = 42).

Age (years	Male	Female	Total
14-20	5	4	9 (21.42%)
21-30	14	8	22 (52.38%)
31-40	2	5	7 (16.66%)
41-50	1	2	3 (7.14%)
>50	1	0	1 (2.38%)
Total	23 (45.23%)	19 (100%)	42 (54.76%)

Table 2: Operative findings and procedures performed in tubercular patients (n = 42).

Operative findings	Number of patients	Procedures
Bands & adhesions	17	Adhesiolysis.
Gross adhesions	3	Biopsy only.
Strictures	14	Resection and end-to-end anastomosis.
Strictures with perforation	3	Resection and ileostomy.
Ileo-caecal mass	3	Right hemicolectomy.
Enlarged mesenteric lymph nodes	2	Release of intestine from lymph nodes.

RESULTS

One hundred & ninety-three patients were admitted and operated for small bowel obstruction during the study period. In 42 (21.76%) patients the underlying cause of obstruction was tuberculosis confirmed by histopathology.

In 42 patients with tubercular obstruction, 23 (54.76%) were males and 19 (45.23%) females, with male to female ratio of 1.2 to 1. Among these, 31 (73.80%) were below and 11 (26.19%) above the age of 30 years. (Table 1)

There were different operative findings in the tubercular patient; 20 (47.61%) had bands & adhesions, 17 (40.47%) had strictures, 3 (7.14%) had ileo-caecal mass and 2 (4.76%) patients had enlarged mesenteric lymph nodes with adherent small bowel. Operative findings and procedures performed are shown in Table 2.

DISCUSSION

The prevalence of tuberculosis is 177 per 100,000 population in Pakistan and it is a common cause of intestinal obstruction.[15] In our study the underlying cause of small bowel obstruction was tuberculosis in 21.76% patients. This figure is higher than that observed in many other studies from Pakistan.[16-21] This shift towards tuberculosis may be due to overall increase in the incidence of tuberculosis.[22]

It is a disease which commonly affects the young people indicated in most studies[23] and also in our study where 73.80% patients were below the age of 30 years.

This study showed that males were slightly more affected than females with a ratio of 1.2:1; also globally the ratio is 1.5 to 2.1:1.[24] Some workers report that the disease is more common in males in the western countries while in developing counties the females predominate.[25]

Abdominal tuberculosis presenting as obstruction is easy to diagnose by taking biopsy during surgery, but when it is not presenting with obstruction the signs and symptoms are non-specific[26,27] and the disease closely mimics many other diseases like crohn's disease, carcinoma, amoebiasis and peri appendicular abscess,[10,28] which may lead to delay in the diagnosis resulting in increased morbidity and mortality.

CONCULUSION

Tuberculosis is the leading cause of small bowel obstruction in our set up. The commonest mode of obstruction are bands, adhesions and strictures.

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