

Surgical challenges in Abdominal Tuberculosis: A study in a newly established tertiary care center of Rajasthan

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Abstract

Background: Abdominal tuberculosis is a diagnostic and therapeutic challenge for clinicians and surgeons. The vague clinical presentation is a barrier to early diagnosis. The study aims to highlight the role of surgery in the diagnosis and treatment of abdominal tuberculosis.

Methods: This is a descriptive study of abdominal tuberculosis cases, which were operated in the Department of Surgery, Rajmata Vijayaraje scindia medical college, bhilwara from September 2017 to July 2020. Total 30 Cases were analyzed in terms of Demography, HIV status, Mode of presentation, Per-operative pathology, and surgical procedure.

Results: Out of 30 cases total 3 cases (10%) were found HIV positive, disease is present in both sex and all age groups. 7 patients were presented as emergencies i.e perforation peritonitis and rest 23 cases were presented as acute and chronic intestinal obstruction. On exploration per-operative pathology found were band adhesion (30 %), strictures(26%), perforation(23%), millary tuberculosis(16%) and one case of cocconization.

Conclusions: The abdomen is one of the common sites of extra-pulmonary involvement. Management involves judicious combination of anti-tubercular therapy and surgery which may be required to treat complications such as intestinal obstruction and perforation. **Keywords:** Abdominal tuberculosis, Intestinal stricture, Bowel perforation, cocconization.

INTRODUCTION

Tuberculosis, especially in developing countries is a major health problem, and causes significant morbidity and mortality. These countries have problems of poverty, over-crowding, and poor sanitation. The population is ignorant and malnutrition is prevalent.¹ Tuberculosis can affect any part of the body. Approximately one-eighth of total TB cases are extra pulmonary.², Out of these abdominal tuberculosis accounts for 11-16%³ It is estimated that in India extra-pulmonary tuberculosis constitutes 15-20 % of all cases of tuberculosis in immune-competent patients⁴ and in HIV positive patients the incidence is up to 50%.^{1,5}

The most common route of infection is by ingestion/swallowing of contaminated materials such as infected sputum or milk. The second route is via haematogenous spread from a distant primary focus (lungs) and rarely, direct spread from the adjacent infected structures such as the fallopian tubes⁶. Ingestion of infected milk has become rare in the West since the pasteurisation of milk and in developing countries, since the habit of boiling milk developed. Bacilli isolated in patients with abdominal TB are therefore mostly *Mycobacterium tuberculosis* and not *Mycobacterium bovis*⁷⁻⁹

The abdominal tuberculosis presents in 3 morphological forms: ulcerative, hypertrophic and combination of both ulcero- hypertrophic.^{10,11,12,13} Most common complication of intestinal tuberculosis is intestinal obstruction attributed to strictures or by adhesions and in India approximately 3-20% of all cases of bowel obstruction are due to the tuberculosis.^{14,15,16} One of the serious complication of abdominal tuberculosis is perforation, causing high morbidity and mortality and it accounts for 5-9% of small intestinal perforations in India.¹⁷

The Study Aims to highlight the role of surgery in the diagnosis and treatment of abdominal tuberculosis.

MATERIAL AND METHOD

Study subjects : All cases admitted in MG hospital bhilwara from September 2017 to July 2020 with complain of acute and chronic abdominal pain and diagnosed as abdominal TB by available methods (clinical examination and history , lab investigation, Xray chest, XRAY FPA , CECT Abdomen, CB NAAT test followed by exploratory laparotomy done under spinal and general anaesthesia) were taken as study subjects.

For conforming the diagnosis, Patients admitted in post operative ward and in intra-operative period tissue biopsy (omentum, lymph node , small bowel , strictures part , peritoneal wall tubercles) were taken.

As a surgical procedure appropriate surgery was planned and operated , Postoperatively all patients were medicated with cephalosporin , streptomycin and metronidazole. As soon as patient become able to take medicine orally, he was shifted to 4 drug antitubercular drug (isonizide , rifampicin , pyrazinamide, ethambutole) for two months then 2 drugs (isonizide , rifampicin) for next 4 months with high protein and semisolid diet.

Result and discussion

Study done on 30 patients suffering from abdominal tuberculosis with acute and chronic condition admitted in MG hospital associated with RVRS Medical College Bhilwara are presented in following table:

Table :1

S. No.			No. of patients (n=30)
1	Age (in years)	0-30	13
		31-50	7
		Above 50	10
2	Sex	Male	16
		Female	14
3	HIV status	HIV positive	3
		HIV Negative	27
4	Mode of presentation	Perforation /peritonitis	7
		Acute intestinal obstruction	12
		Chronic obstruction/lump	11
5	Per operative pathology	Band/adhesion	9
		Perforation	7
		stricture	8
		cocconization	1
		Milliary tubercles	5
6	Surgical procedure	Adhesinolysis and excision of band	12
		Resection of ileum and anastomosis	10
		Ileo-transvers anstomosis	8

Present study showed a slight male predominance than females. However some authors have quoted female dominance in their studies.^{18,19} and In the western countries the disease is more common in the males, mainly occurring in the migrated Asian population.²⁰

In present study total 3 cases (10%) were found HIV positive and in study conducted at United States revealed that majority of abdominal tuberculosis cases have been found in patients with HIV.²¹

Acute presentation of the disease was the common mode of presentation which essentially brought them for the hospitalization and treatment. In our study seven patients were found as emergencies i.e perforation peritonitis and 12 cases were found as acute obstruction and rest 11 cases were with chronic intestinal obstruction.

Similarly, the study of A Mukhopadhyay²² shows significant percentage (10%) of all cases attending the emergency with an acute abdomen.

On exploration per-operative pathology found were band adhesion (30 %), strictures(26%), perforation(23%), miliary tuberculosis(16%) and one case of cocconization .

In the resent studies, As a surgical procedure excision of band and Adhesiolysis were done in 40 percent cases, all perforated and ileal stricture were treated as excise and end to end anastomosis (33%), rest of the cases were treated by bypass procedure like Ileo-transvers anstomosis (26%) . Whereas, other studies also suggests that multiple strictures in a segment may require resection and anastomosis.^{23,24}

Conclusion

Tuberculosis has staged a global comeback and forms a dangerous combination with AIDS. The abdomen is one of the common sites of extra-pulmonary involvement. Patients with abdominal tuberculosis have a wide range and spectrum of symptoms and signs; the disease is therefore a great mimic. Diagnosis, mainly radiological and supported by endoscopy, is difficult to make and laparotomy is required in a large number of patient. Management involves judicious combination of anti-tubercular therapy and surgery which may be required to treat complications such as intestinal obstruction and perforation. The disease, though potentially curable, carries a significant morbidity and mortality.

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