



EVALUATION, ANALYSIS AND SURGICAL MANAGEMENT OF ABDOMINAL TUBERCULOSIS

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ABSTRACT BACKGROUND Tuberculosis (TB) is an irresistible illness brought about by M. tuberculosis. It has been available in people since relic and has become a significant reason for death and inability in many parts of the world, particularly in developing countries.[1,2] Abdomen is involved in 11% of patients with extra-pulmonary tuberculosis. Abdominal Tuberculosis incorporates tuberculosis contamination of gastrointestinal tract, mesentery, lymph nodes and omentum, the peritoneum and organs such as liver and spleen.[3,4] underlying clinical symptoms are vague as the disease includes numerous symptoms with various morphology. No single lab examination is pathognomic.[5]. Histopathology and tissue study is however gold standard but time taking and costly. The occurrence of abdominal tuberculosis is expanding because of expanding rate of AIDS. It might imitate other gastrointestinal diseases like inflammatory bowel disease, malignancies.

KEYWORDS : Tuberculosis, Ileocaecal Junction, Lymph Nodes.

INTRODUCTION

In spite of considerable advances in recent times, tuberculosis, particularly of abdomen, still continues to be a major health problem in India. The disease is a diagnostic enigma and the management is still controversial. Surgical treatments, both radical and conservative, are being advocated. Approximately one fifth of patients require surgical intervention. Abdominal tuberculosis (ATB) is a great mimic and an important cause of morbidity.

Abdomen is involved in 11% of patients with extra-pulmonary tuberculosis; The most common site of involvement is the ileocaecal region, other locations of involvement, in order of descending frequency, are the ascending colon, jejunum, appendix, duodenum, stomach, esophagus, sigmoid colon, and rectum. Apart from the basic work up, Investigations like CT scan, EUS, Capsule endoscopy, Balloon enteroscopy, Ascetic fluid ADA, TB-PCR, and Gene pert, Laparoscopy are being increasingly used to diagnose tuberculosis. Therapy with standard antituberculous drugs is usually highly effective for intestinal TB.

Six-month therapy is as effective as nine-month therapy. Multi-Drug Resistance (MDR) has been observed in 13% of MTB isolates. The development of Drug Induced Hepatotoxicity (DIH) during therapy for TB is the most common reason leading to interruption of therapy. Surgery is usually reserved for patients who have developed complications or obstruction not responding to medical management.

Abdominal tuberculosis probably occurs due to reactivation of a dormant focus. This primary gastrointestinal focus is established as a result of haematogenous spread from a pulmonary focus acquired during primary infection in childhood. It may also be caused by swallowed bacilli which pass through the Peyer's patches of the intestinal mucosa and are transported by macrophages through the lymphatics to the mesenteric lymph nodes, where they remain dormant. The most common site of involvement is the ileocaecal region, possibly because of the increased physiological stasis, increased rate of fluid and electrolyte absorption, minimal digestive activity and an abundance of lymphoid tissue at this site.

AIM OF THE STUDY

The aim of this study is to evaluate the surgical management of abdominal Tuberculosis.

OBJECTIVES OF THE STUDY

1) To study the various clinic-pathological manifestations of abdominal tuberculosis.

- 2) To study the various factors determining the surgical management of abdominal tuberculosis.
- 3) To study the various surgical treatment modalities, their complications and outcome in the management of abdominal tuberculosis.

MATERIAL AND METHODS

A clinical study of 40 cases of abdominal tuberculosis is studied in which observational prospective study is done.

Inclusion Criteria:

All patients male and female between the age group 15-70yrs presenting with various manifestations and complications of abdominal tuberculosis.

Exclusion criteria:

- 1) Patients less than 14 yrs. and more than 60 yrs. of age.
- 2) Pregnant women.
- 3) All conservative cases which can be treated medically.
- 4) Patients in whom follow up is not feasible.

OBSERVATIONS AND RESULTS:

Table No.1 Age Distribution

Age in Years	15-20	21- 30	31-40	41-50	51-60	Total
Numbers	7	12	9	8	4	40
Percentage%	17.5	30	22.5	20	10	100%
Mean Age (in years)	32.68					

In this study the age of the patients varied from 16 to 60 years. Table number 1, shows the age distribution among various age groups. The mean age in the present series was 32.68 years. Most of the cases were in 2nd 3rd and 4th decades of life contributing 74 % of the total. Chart 1 shows the age distribution in the present study.

Table No.2 Sex Distribution

In the present series of 40 cases 62.5 % of cases were males and the remaining 37.5 % formed by the females'. There was no age difference between males and females. Male: Female ratio was found to be 1.5:1. Table number 2 show the sex distribution in the present series of fifty cases.

Sex	Number	Percentage%
Male	25	62.5
Female	15	37.5
M : F Ratio = 1.6 : 1		

Table No. 3 Symptoms

Symptoms	Numbers	Percentage%
Abdominal pain	35	87.5
Altered bowel habits	26	52
Vomiting	23	46
Distension	22	44
Fever	14	28
Abdominal mass	6	15

Out of 40 cases 35 patients (87%) has abdominal pain which is the most predominating symptom followed by altered bowel habits which is seen in 26 cases (52%) followed by vomiting and abdominal distension (46%), (44%)

Table 4: Mode of Presentation

Diagnosis	Numbers	Percentage%
Sub-acute Intestinal Obstruction	16	40
Acute Intestinal Obstruction	12	30
Mass per abdomen	8	20
Perforative Peritonitis	4	10

In the present study out of 40 cases 16 people(40%)had sub acute intestinal obstruction ,12cases (30%) had acute intestinal obstruction , 8 cases (20%) had presented with mass per abdomen and 2 cases (10%) were presented with perforative peritonitis

Table 5: Surgical Options

Procedure	Number	Percentage%
RESECTIONS		
Limited(Segmental)	8	20
Right Hemi colectomy	4	10
STRICTUROPLASTY	5	12.5
PERFORATION CLOSURE	4	10
ADHESIONOLYSIS	6	15
STOMA	3	7.5
Diagnostic laproscopy and biopsy	6	15
Exploratory laparotomy and biopsy	4	10

Out of 40 cases in the present series 8 cases (20%)had undergone limited segmental resection followed by Adhesionolysis 6 cases (15%), 4 cases had undergone perforation closure (10%), 5 cases (12.5%) were undergone stricturoplasty, 4 cases(10%) right hemicolectomy,3cases(7.5%) were undergone stoma reconstruction. 10 were for diagnostic purpose .6 patients underwent diagnostic laproscopy and biopsy of mesenteric node, omentum or peritoneum which confirmed abdominal tuberculosis and ATT was commenced ,4 underwent exploratory laparotomy and biopsy for confirmation of diagnosis as the findings were inconclusive even after diagnostic laproscopy .post operatively HPE was carried out in all cases which showed classical casseating granulomas .so all patients have started ATT as soon as the paralytic ileus recovered.

Table 6: Histopathological Diagnosis

Site	Pathological Type	Numbers	Percentage
INTESTINAL	Hyperplastic	30	75
	Ulcerative	4	10
PERITONEAL	Ascetic	Nil	-
	Gaseous	Nil	-
	Plastic	1	2
	Mixed	Nil	-
MESENTERIC NODE		5	12

In the present study out of 40 cases 30 cases were hyperplastic (75%) on post operative Histopathological examination and 4 cases (10%)were ulcerative and 5 cases (12%) showing mesenteric node specimen and 1 cases is (2%) plastic type.

Table 7: Post Operative Complications

Procedure	Cases	Post-Operative Complications	Percentage%
Limited(Segmental)	8	1leak	12
Primary Perforation Closure	4	2leaks	50
Stricturoplasty	5	2Rucurrence	40
Right Hemi colectomy	4	2leaks	50
Adhesionolysis	6	2Rucurrence	33
Stoma	3	0	0

In the present study out of 40 cases , 3 cases of stoma reconstruction doesn't show any post op complications followed by segmental resection out of 8 cases only 1 cases(12%) had presented with post op leak ,out of 4 cases of right hemicolectomy 2 cases(50%) had post operative leak .

Socio- Economic Status:

In the present study all the patients except two belonged to lower socio-economic strata of the society.

Symptomatology and management:

The symptoms in the present series had duration ranging between one day to few years. 42% had one or more symptoms for duration of more than three months. In the present series Abdominal pain was the most common presenting complaint, present in 90 % of cases. Lower abdominal pain was the commonest followed by per umbilical and generalized abdominal pain. In most cases pain was described as colicky and intermittent.

Abdominal distention, vomiting, mass per abdomen, loss of weight, loss of appetite and fever were the other common complaints. Abdominal tenderness was the most common physical finding (56%), followed by distention (48%) and mass per abdomen (26%).

Approach to the treatment was surgical where if preoperative diagnosis is unknown then diagnostic laproscopy or exploratory laparotomy and biopsy can be done based on post operative HPE, ATT was started. In case of emergency conditions where Limited (Segmental) resection (20%) was preferred over right hemi colectomy (10%).in which in segmental recurrence out of 8cases only 1 case (12%) shows leak and out of 3 stoma cases no recurrence is seen.

All the cases that were discharged were advised six months of ATT, and showed good results. some survey studies have exhibited that anti-TB treatment are typically + practical and related with low mortality(0–6%) in abdominal TB. However, abdominal TB has a high mortality rate (6–20%), and most of patients had extreme complexities and required emergency exploratory laparotomy.

SUMMARY AND CONCLUSION

Abdominal TB is a respectably phenomenal sign of extra pulmonary TB. Abdominal TB can be of various structures, including luminal, peritoneal, nodal, and visceral. A high rundown of clinical uncertainty is required to make a finish of abdominal TB as a result of the ambiguous clinical signs and radiologic features. Even though the modalities of investigations and imaging have significantly improved in modern times with sophisticated and high resolution images providing better preoperative diagnosis but abdominal tuberculosis remains obscure in significant number of patients,

In such patients **OPERATIVE INTERVENTION** in the form of minimally invasive diagnostic laproscopy or biopsy for **TISSUE DIAGNOSIS** are still required for **CONFIRMATION OF DIAGNOSIS**. In addition **SURGICAL MANAGEMENT** is helpful in both elective and emergency settings as a **DEFINITIVE MANAGEMENT** in addition to anti tubercular treatment. In my present study shows limited segmental resection and stoma has less recurrence rates when compared to other modalities of surgery

Early finding and reasonable treatment of abdominal TB may decrease morbidity and mortality.

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