Original article

Abdominal Tuberculosis

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Abstract:33 patients with abdominal tuberculosis admitted in surgical unit of Dhaka Medical College Hospital from October 1987 to July 1990 were included in this study. 8 (24.24%) patients presented with emergency of which .6 (18.18%) were acute intestinal obstruction. Gastrointestinal tract was involved in (69.69%) 23 cases, with majority (39.39%) in the ilco-caccal area. Peritoneum was involved in 3% cases and only lymph node involved in 18.18% cases. Most rare site for abdominal tuberculous involvement was the gall bladder (3%). Correct preoperative diagnosis was done only in 33% cases. Evidence of Pulmonary tuberculosis was present only in 15.15% cases.

Key - Words: Tuberculosis : Gastrointestinal, Peritoneal, Lymph node.

Introduction

Tuberculosis can affect intestinal was presumed even 2000 years before the identification of tubercle bacilli by Robert Koch in 1882. Hippocrates pronounced the aphorism Diarrhoca attacking a person affected with pthysis is a mortal symptom'1 .Intestinal involvement seems to be the most frequent complication of pulmonary tuberculosis2, but it can occur even without any evidence of pulmonary tuberculosis . Prior to the development of antituberculous drugs, at least 70% patients with far advanced pulmonary tuberculosis had tuberculous enteritis Range may vary from 3 - 90% 5. Only a fraction of intestinal involvement shows radiological evidence. In one series of 5529 patients of pulmonary tuberculosis only 6.25% patient had radiological features of intestinal involvement Again only about one third of patient with radiological features of intestinal involvement are symptomatic.

Tuberculous bacilli reach intestine by swallowing) of sputum (human variety) or infected milk (bovine variety). Hacmatogenous spread is also a possibility

These bacilli reach the gut and colonize lymphoid tissue and can infect intestine or lymph nodes. As people in our country get very little milk and even if they get, they took boiled milk. So bovine variety is very rare in our country.

Abdominal tuberculosis (excluding genitourinary tuberculosis) can be divided into (i) Tuberculosis of the alimentary tract (ii) Tuberculosis of tic. Peritoneum (iii) Tuberculosis of the reticulo-endothelial system (iv) Miscellancous.(Liver, gall bladder)6. Again intestinal tuberculosis may be of three types (i) ulcerative (ii) hypertrophic (iii) ulccro-hypertrophic. Ulcerative variety results from continuous inoculation of bacilli from Lungs. All arc secondary. Hypertrophic variety, occurs in patients with high resistance to tuberculosis. It is often the only lesion and caused by bovine variety. Hoo-caccal area is the most common site of tuberculous enteritis), followed by (decreasing order) ascending colon, jejunum, appendix, duodenum, stomach, sigmoid color, rectum . Caccum is affected in 80 - 90% of cases.

Materials and Methods:

33 patients with abdominal tuberculosis admitted in surgical unit under our care in Dhaka Medical College Hospital from October 1987 to July 1990 were included in this study. Detailed history, complete physical examination and radiological examination were done. All but two patients had Laparotomy done. Diagnosis was established by histopathological examination of biopsy specimen. Every body had anti-tubercular drugs.

Results:

Total 33 patients with abdominal tuberculosis were included in this study. Age ranging from 11 to 65 years. Most of the patients were between 21-30 years age (Table 1). Mean age was 29 year.

Table 1: Age distribution (n=33)

Age	Number	%
1-10	0	0
11-20	7	22.22%
21-30	13	39.39%
31-40	5	15.15%
41-50	4	12.12%
>50	4	12.12%

Table 2: sex distribution

Female	Male
18	15
54,54%	45.45%

male ration was 1.2 :I (Table 2)

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8 out of 33 (i.e. 24.24%) patients admitted in the hospital with emergency. 6 (18.18%) had acute intestinal obstruction. 1 patient presented with intractable diarrhea, another patient presented with features of enteric perforation.

Pain in abdomen, weakness, and weight loss are almost constant features of intestinal tuberculosis (Table 3). In 10 patients, out of 31 patients with abdominal pain, pain confined to right iliac fossa. In 11 (33.33%) patient weight loss was very severe. Fever was feature of 21 (63.63%) patients (in some cases history of fever was elicited post operatively). In all but one the lever was high and lasted for a very short period.

Diarrhea was a feature in 4 patients. But one patient presented with intractable diarrhea with passage of blood and mucous.

Table 3, Presentation in 33 patients,

Presentation	Number	Percentage
Pain in abdomen	31	93.94
Weakness	33	100
Weight loss	30	90.9
Fever	21	63.64
Constipation	20	60.60
Diarrhoea	4	12.12
Malaena	1	3
Ascitcs	1	3
Abdominal mass	22	66.67
Cervical Lymphadenopathy	2	6.06
Cough	1	3

Most common pre-operative diagnosis was intestinal obstruction. In 6 patient, presentation was acute intestinal obstruction and in rest 9 cases, subacute intestinal obstruction. Clinical diagnosis of ilco-caccal tuberculosis was made, inn 10 (30.30%) Patients (Table,-1). Most uncommon preoperative, diagnosis for abdominal tuberculosis was cholelithiasis.

Table -4. Pre,-operative, diagnosis.

Preoperative, diagnosis	Number
Ileo-caecal tuberculosis	10
Intestinal perforation	1
Acute appendicitis	2
Ulcerative colitis	1
Abdominal Lymphoma	3
Intestinal obstruction	15*
Cholclithiasis	1
Crohn's disease	1
Mesenteric cyst	1
Appendicular lump	1
Carcinoma caecum	1

In 4 of these 15 cases of intestinal obstruction ilco-caccal tuberculosis was diagnosed.

Radiological evidence of pulmonary tuberculosis was present only in 5 (15.15%) cases. Of this 5 cases, miliary tuberculosis in 2 cases and apical cavitations in 3 cases.

In 23 cases site of involvement was gastro-intestinal tract (Table 5). 20 cases (60.61%), of these 23 either ileum or ilco-caecal area were involved. In one (3.0%) patient there was jejunal stricture with jejunal perforation. In one patient entire colon was involved with marked involvement in the rectum and sigmoid colon. In 4 patient enteric involvement was associated marked nodal involvement, but they were not included in the reticuloendothelial system (RES). Peritonitis in this series was only 3%. In one patient there was carcinoma caecum with nodal metastasis with nodal tuberculosis. Most unusual site in this series was gall bladder (3%).

Table 5 Sites of involvement

	Site	Number
A. Gastrointestinal tract (23)	Jejunal	I
	Ileal	7
	Ileo-caecal	13
	Ascending colon	1
	Rectum and sigmoid colon	1
B. Peritoneum (1)	Encysted peritonitis	1
C. RES (only) (6)	Para-aortic	5
	Mesenteric	1
D. Others (3)	Gall bladder	1
	Unknown	2

Out of 33 patients, laparotomy performed in 31 (94%) patients. Right hemicolectomy was done in 10 patients. In another 6 cases right hemicolectomy was not possible so only ileo- transverse anastomosis was done. Total

Colectomy was done in one patient with the diagnosis of ulcerative calitis. In another case, Cholecystectomy was

done for non-functioning gall-bladder. Ultimately it came out to be, the tuberculosis of the gall-bladder (Table - 6).

Table 5 Types of operations performed in 31 patient undergone laparotomy

	Operation performed	
1.	Right hemicolectomy	10
2.	Only Ileo-transverse anastomosis	6
3.	Total colectomy	1
4.	Resection-Anastomosis of small intestine	3
5.	Ileo-ileal anastomosis	1
6.	Only biopsy from surface tubercle and abdominal Lymph nodes	4
7.	Scooping out of caseating Lymph node and lymph node biopsy	4
8.	Omental biopsy and drainage of encysted fluid	1
9.	Cholecystectomy	1
	Total	31

Two (6.0%) patients expired in postoperativc period. Immediate post operative complications were few (Table 7). The patient with the tuberculosis of the gall-bladder developed temporary biliary fistula with marked skin escoration. In all patient antitubercular therapy were given. But only 12 (36.36%) patient attended in ward for follow up and majority 19 (57.58%) did not report to the ward. Half of these patient who were followed up had some sort of late complications (Table-7). In one drug had to be changed for visual problem and in another re-exploration was done as patient developed intestinal obstruction due to internal herniation.

Table 7 : Early and Late complications

	Complications		
A.	Early Complications	Wound infection	4
		Biliary fistula	1
		Respiratory tract infection	6
B.	Late Complications	Visual disturbance	1
	1	Keloid	1
	2	Internal Herniation	1
	3	Occasional pain in RIF	2
		Thrombophlebitis of Rt. great saphenous vein	1

Discussion:

13 (39.39%) out of 33 patients, were in 3rd decade with mean age 29 year. Several studies from our country also showed similar result. In small Rolics series, 17 out of 27 (62.96%) and in Rabiul's (1984) series, 20 out of 38 (52.63%) were in 3rd decade. Sherman (1978) claimed 3rd -,in[] 4th decade lobe the most frequent age. But die present series as well as other two series mentioned before found 4th decade is not so common. Mean age in Bentley's (1967) series was 63 years as compared to 29 years in our series. This represents improved control of tuberculosis in the young people in the west.

Females arc predominantly affected in the present series with ratio 1.2:1. Rouf (1982) found female : Male ratio 1.7:1, Bentley (1967) found 2.5:1 and Prokash (1978) found 2:1. Overall social negligence in female probably be a factor for more tuberculous affection in female, i.e. females are less exposed to medicare when the disease is in pulmonary stage.

In this series 24.24% patients admitted in the hospital with emergency. It is 19.8% in Roufs (1982) scrics, 10% - 20% in some Indian series (Prokash-1972) and 1-5% in British series (Sukla & Hugcs-1978). So it appears that acute presentation is more common in this subcontinent than western people.

In this present series 15 out of 33 (45.45%) patients presented with features of intestinal obstruction. Das and Sukla (1976) found 93 out of 182 (51.1 %) had intestinal obstruction. So intestinal obstruction is one of the most important presenting feature of abdominal tuberculosis.

In this series 3.0% of abdominal tuberculosis presented with perforation. Conversely different series showed tuberculosis accounts for 5-15% of small intestinal perforation. Rahman (1990) found 15.21, Hossein (1984) found 7.41%. Khundkar (1983) found and Bansali (1967) !Mind 5.7%.

Correct clinical diagnosis of abdominal tuberculosis was made in 30.30% cases. Das P and Sukla (1976) reported 50% accuracy and Hoon (1950) reported 34% accuracy. So it appears abdominal tuberculosis may present as any bizzare abdominal sign and symptoms. Very high degree of suspicion is required to achieve correct diagnosis.

Pulmonary lesion is not always present. In the present series pulmonary tuberculosis was detected in 15.15% of cases. Pulmonary lesion detected 33% in Rout's (1982) series and 39% in Prokash's (1978) series. Presence of pulmonary tuberculosis helps in diagnosis.

Among gastrointestinal tract, ileum and ilco-caceal area is the most favoured site of abdominal tuberculosis. In the present series 87% of gastrointestinal and 60.61% of total abdominal lesions occured in ileum and ilco-caceal area. Mycobacterium has got a fatty capsule, which impedes its release until it reaches an -area of physiological stasis, increased digestion and abundant lymphoid tissues. Hence ileo-caceal area is the most predominant site of involvement (Tabrisky - 1975). Tuberculosis of the colon is rare (Kochhar - 1988). In the present series in 2 (6.0%) cases colon (excluding ileo-caceal area) were affected. In one case entire colon was affected mimicking ulcerative colitis.

Tubercular peritonitis, in this series is 3%. Tubercular peritonitis appears rare and prevalent in young age group. Tahmina (1991) found 1.11 % abdominal tuberculosis in her series of 270 intestinal obstruction in paediatric age group. One third of abdominal tuberculosis was tubercular peritonitis in her series.

Only 1 case (3%) of gall bladder tuberculosis was found in this series. Tuberculosis of the gall bladder is a very rare entity (Abascal - 1988, Arias -Vallejo 1950; Bergdahl - 1972, Leader - 1952). Organism reach gall bladder by stream or by lymphatics (Arias-Vallejo 1950; Bergdahl - 1972). Gall bladder can only be infected when the organ has cholelithiasis or otherwise diseased (Arias-vahejo -1950; Bergdahl-1972).

In 31, out of 33 (94%) cases Laparotomy was performed. In another case cervical lymph node biopery was done. In the rest I case. no form of operation and histological examination was done. Bentley (1967) performed operation in 100% cases and Rout (M2) performed Laparotomy in 96% cases. Among different operations right hemicolectomy was performed in 10.30% of the present series, 43% of Bentley's (1967) series and 74% of Roars (1982) seris.

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