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ORIGINAL RESEARCH

Assessment of histopathological examination of abdominal tuberculosis cases

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Abstract

Background: Tuberculosis can affect any part of the body and the abdomen is the next common site after the lungs are affected by the disease. The present study was conducted to assess histopathological examination of abdominal tuberculosis cases.

Materials & Methods: 30 cases of abdominal tuberculosis age 15-70 years of both genders after surgery, specimens/ peritoneal fluids were sent for microbiological (AFB staining/ CBNAAT) examination and histopathological examination.

Results: Out of 30 patients, males were 17 and females were 13. Out of 30 patients, 22 (73.3%) were from rural and 8 (26.7%) were from urban region. Association with pulmonary TB was seen in 7 cases. Out of 30 cases, 1 found to be HIV positive and 29 HIV negative. Family history was positive in 4 cases. HPE findings showed tubercular lesions in 14 cases and non- specific chronic inflammatory lesions in 5 cases. CBNAAT showed 8 positive and 1 negative case. The difference was significant ($P< 0.05$).

Conclusion: Histopathological findings showed tubercular lesions and non- specific chronic inflammatory lesions.

Key words: Abdominal tuberculosis, CBNAAT, Histopathological

Introduction

Tuberculosis can affect any part of the body and the abdomen is the next common site after lungs affected by the disease.[1] In the abdomen, tuberculosis may affect the gastro-intestinal tract, peritoneum, lymph nodes, and solid viscera. Approximately 1-3% of total TB cases are extra pulmonary, of these abdominal tuberculosis (ATB) accounts for 11%-16%.[2] In HIV-positive patients the incidence of extrapulmonary TB is up to 50%. Different forms of abdominal TB, such as chronic, acute, and acute on-chronic, might manifest differently.[3] It can also happen by accident during a laparotomy procedure for another illness. The place and type of involvement determine the clinical presentation.[4] It typically progresses slowly and manifests itself later with consequences, particularly acute or subacute intestinal blockage brought on by a mass (tuberculoma), stricture formation in the ileocaecal area or small intestine, or intestinal perforation resulting in peritonitis.[5] The modes of infection of abdominal tuberculosis include hematogenous spread from a primary lung focus that reactivates later or miliary tuberculosis, spread via lymphatics from infected nodes, ingestion

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of bacilli either from the sputum or from infected sources such as milk products, or by direct spread from adjacent organs.[6]
The treatment of abdominal tuberculosis is mainly conservative (non-operatively) with anti-tuberculous therapy and surgical treatment is reserved for complications such as intestinal obstruction and bowel perforation with peritonitis.[7,8] The present study was conducted to assess histopathological examination of abdominal tuberculosis cases.

Materials & Methods

The present study consisted of 30 cases of abdominal tuberculosis age 15-70 years of both genders. The study was conducted in BRD Medical college, Gorakhpur. A valid written consent was obtained from all enrolled patients to participate in the study.
Data such as name, age, gender etc. was recorded. After taking the history, a thorough physical examination was carried out. After surgery, specimens/ peritoneal fluids were sent for microbiological (AFB staining/ CBNAAT) examination and histopathological examination. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

Results

Table I Distribution of patients

Total- 30		
Gender	**Male**	**Female**
Number	17	13

Table I shows that out of 30 patients, males were 17 and females were 13.

Table II Regional distribution

Region	Number	Percentage
Rural	22	73.3%
Urban	8	26.7%

Table II shows that out of 30 patients, 22 (73.3%) were from rural and 8 (26.7%) were from urban region.

Table III Assessment of parameters

Parameters	Variables	Number	P value
Association with pulmonary TB	Yes	7	0.02
	No	23	
HIV	HIV positive	1	0.01
	HIV negative	29	
Family history	Yes	4	0.03
	No	26	
HPE findings	Tubercular lesion	14	0.05
	Non- specific chronic inflammatory lesion	5	
CBNAAT (9)	Positive	8	0.01
	Negative	1	

Table III, graph I show that association with pulmonary TB was seen in 7 cases. Out of 30 cases, 1 found to be HIV positive and 29 HIV negative. Family history was positive in 4 cases. HPE findings showed tubercular lesions in 14 cases and non- specific chronic inflammatory lesions in 5 cases. CBNAAT showed 8 positive and 1 negative case. The difference was significant (P< 0.05).

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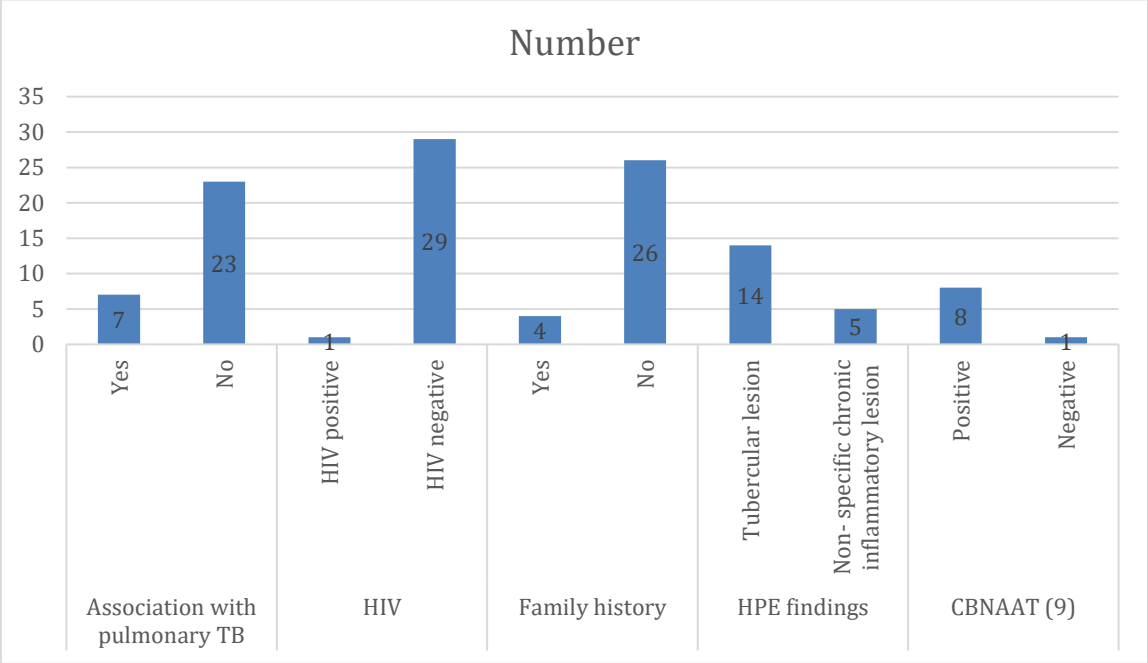
Graph I Assessment of parameters



Discussion

Tuberculosis continues to be prevalent in the underdeveloped and developing third world, and although it was on the verge of eradication in the developed world, its prevalence is increasing there too, due to factors such as trans global immigration, ageing populations, alcoholism, socio-economic deprivation, and more recently, acquired immunodeficiency syndrome (AIDS).[9,10] Tuberculosis (TB) can involve any part of the gastrointestinal tract from mouth to anus, the peritoneum and the pancreatobiliary system. Both the incidence and the severity of abdominal tuberculosis are expected to increase with increasing incidence of HIV infection in India.[11,12] The present study was conducted to assess histopathological examination of abdominal tuberculosis cases.

We found that out of 30 patients, males were 17 and females were 13. Choudhary et al[13] enrolled 59 patients who were above 14 years of age and operated for obstruction of small bowel. There were a total 59 patients operated on during this period, out of these, 19 were female and 40 were male. Patients from 3rd decades (37.29%) of their life were most commonly affected. Abdomen pain was the most common symptom found in all 59 patients. Ileal Stricture was most common gross finding. Resection anastomosis was done in 71.19%.

We found that out of 30 patients, 22 (73.3%) were from rural and 8 (26.7%) were from urban region. Sircar et al[14] studied clinical presentation of abdominal tuberculosis in 298 adult cases. These constituted 17% of the total number of admissions for tuberculosis. Age at presentation was variable with maximum cases in 21 to 40-year age group (58% of cases) with a mean age of 32.7 years. There was a slight female preponderance (57%). Sixty-three percent were residing in urban areas. Pain abdomen, ascites and subacute intestinal obstruction were the commonest modes of presentation (34%, 30%, 28% respectively). Other clinical features included fever (21%), altered bowel habits (19%), weight loss (8%) and lump abdomen (6%). Acute intestinal obstruction and lower gastrointestinal bleeding were uncommon (5% and 4% respectively). Co-existent pulmonary tuberculosis was seen in 16% cases. Histological evidence was available in 41% cases. The majority improved with

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conservative management with only 21% requiring surgical intervention. Mortality recorded was 11%.

We found that association with pulmonary TB was seen in 7 cases. Out of 30 cases, 1 found to be HIV positive and 29 HIV negative. Family history was positive in 4 cases. HPE findings showed tubercular lesions in 14 cases and non- specific chronic inflammatory lesions in 5 cases. CBNAAT showed 8 positive and 1 negative case. Urabinahatti et al[15] found that out of 40 patients with abdominal tuberculosis, 26 were males (65%) and 14 (35%) were females. male to female ratio was 1.8:1. Adults in their 3rd decade (37.5%) and 4th decade (22.5%) were most commonly affected. Pain abdomen was the most common presenting complaint in 82.5% cases. Abdomen distension was the most common sign (75%). Pulmonary tuberculosis was associated with in 22.5% cases. 5% cases of abdominal tuberculosis were co infected with HIV infection. 55% cases underwent surgical management followed by ATT, and 45% cases needed only ATT as treatment. In cases explored surgically, ulcero sclerotic type (ileal stricture with perforation) was the most common pathology seen in 31.8% cases. Ileocecal region was the most common site of involvement with 67.3% occurrence. Mortality rate was 5%.

Arunima et al[16] found that the clinical presentations of acute abdomen was acute intestinal obstruction, perforative peritonitis and acute appendicitis etc. Terminal ileum and ileocaecal region were predominantly involved. The most common pathology was intestinal stricture with or without perforation. Most of the patients (approx 78.5%) required emergency surgery as a therapeutic intervention. A two-stage procedure was preferred in peritonitis and sepsis. Most of the remaining patients (12.8%) required surgery after initial conservative treatment for the first few days. Undiagnosed Abdominal Tuberculosis represents a notable percentage (10%) of patients who present with an acute abdomen as a surgical emergency.

Conclusion

Authors found that histopathological findings showed tubercular lesions and non- specific chronic inflammatory lesions.

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