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Abdominal tuberculosis: incidence, diagnostic, and management experience at tertiary care center in India

[1]Rajkumar Yadav, Senior Professor, Department of CTVS, SMS Medical College, Jaipur

[2]Rajesh Sharma, Assistant Professor, Department of CTVS, SMS Medical College, Jaipur

[3]Sanjeev Singh Choudhary, Senior Resident, Department of General Surgery, SMS Medical College, Jaipur

[4]Deviprasad Saini, Senior Resident, Department of CTVS, SMS Medical College, Jaipur

Corresponding Author: Sanjeev Singh Choudhary, Senior Resident, Department of General Surgery, SMS Medical College, Jaipur

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Abstract

Background: The present study is undertaken to have detailed clinical evaluation of such cases together with role of latest diagnostic aids in arriving for correct diagnosis. The present study is aimed for determination of correct management of such cases.

Methods: In this study 100 cases of intestinal tuberculosis admitted in various surgical units of J.L.N Hospital, Ajmer were studied. After thorough history and general physical examination, the examination of the abdomen was carried out, various details about abdominal finding specially about lump if present was noted down. We aimed to know critical analysis of patients with intestinal tuberculosis.

Results: Mean of haemoglobin concentration was 10.5 gm% the lowest level recorded in the present study was 6.0 gm% and the highest 13.5 gm%. Total leucocyte count had nothing specific to suggest. Lymphocytosis was in 46% cases. AFB positive for sputum in 16% cases and M T positive in 4% cases. FNAC was done in cases having lump right iliac fossa. It was positive for tuberculosis in 10 cases and 4 cases had necrotic material with epithiloid granuloma.

Conclusion: We found that the commonest complaint of patients was pain, in the present series 100% patients had pain. Pain was generally diffuse, vague and uncharacteristic, in order of frequency the symptoms are pain, vomiting, distension, loss of appetite, constipation, weight loss, fever, cough and gola formation.

Keywords: Pain, Fever, Cough

Introduction

There is abundant proof that abdominal tuberculosis is a disease which is as old as civilisation. Intestinal tuberculosis is one of the earliest known disease of mankind.

Hippocrates as early as 460 B.C. remained about abdominal tuberculosis that the diarrhea at tacking a person with chronic cough is mortal symptom. The association of pulmonary tuberculosis with inflammatory intestinal lesion was recognised firstly by Paustianetal.,1976.1

In1882,Robert Koch discovered tubercle bacillus, an import ant bacteriological research. More than hundred years have passed yet tuberculosis remains the major and complicated national health problem in our country. The incidence of intestinal tuberculosis continues to be high in our country. Abdominal tuberculosis is responsible for a considerable morbidity and mortality. The term "abdominal tuberculosis" denote intestinal, glandular and peritoneal tuberculosis which is far more common than tuberculosis diseases of other abdominal viscera. Intestine is affected by tuberculosis but lesions produced are less serious and can be effectively treated either by surgical methods or by modern chemotherapy. Intestinal tuberculosis is more common in developing countries and despite considerable progress made in therapy during the last quarter of the century tuberculosis of various sites continues to be major health hazard in India(Bhansali,1978).2

Swallowing of infected sputum is also one of the causative factor of abdominal tuberculosis, illiteracy, starvation, poor hygiene, low socio economic status, custom of pardha, early marriages are few causative factor responsible for continuous prevalence of the disease. While previously rare in Western countries the incidence of now rising among immigrants and patients with AIDS, HIV infected patients. The disease is of rapidly progressive in nature often fetal though usually trea table, but the diagnosis is difficult and often delayed (AhmedHassanetal.,1994). 3

According to Stuyn E, Malkelt I, Price SK4 (1993) abdominal tuberculosis is still a potentially lethal disease. Surgery is indicated either in the management of acute complications or for chronic symptoms. Tuberculosis lesion of the intestine is still one of the commonest lesion encountered during operative management f acute abdomen in most of the developing countries. In the pre-chemotherapeutic era abdominal tuberculosis was mainly treated by surgery, either by simply by-pass oi' extensive resection of the disease bowel depending upon the condition of the patient. Since the advent of extremely effective chemotherapeutic agents, only minimal surgery is performed in the form of local resection for hyperplastic tuberculosis and strictureplasty for annul a stricture of the small and large bowel with consistently good results.

The present study is undertaken to have detailed clinical evaluation of such cases together with role of latest diagnostic aids in arriving for correct diagnosis. The present study is aimed for determination of correct management of such cases.

Material and methods

In this study 100 cases of intestinal tuberculosis admitted in various surgical units of J.L.N Hospital, Ajmer were studied. After thorough history and general physical examination, the examination of the abdomen was carried out, various details about abdominal finding specially about lump if present was noted down. We aimed to know critical analysis of patients with intestinal tuberculosis.

Results

The present study comprised of 100 cases which presented with acute as well as chronic tubercular abdomen, admitted at J.L.N Medical College and associated Group of Hospitals, Ajmer. In our series out of 100 patients 66 were females and 34 were males. The male: female is 1:2.

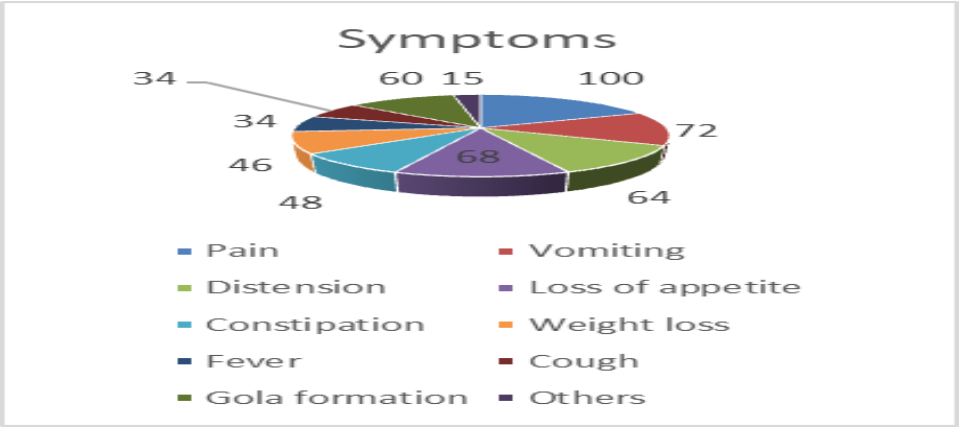
We found that maximum number of patients (38%) belong to the age group between 21-30 years. The

youngest patients was 11 years old male and eldest was 70 years old female. 64 cases belonged to low-socioeconomic status and 26 belonged to middle class families and 10 cases belonged to higher social status. **In table1**, the commonest finding in the study was distension of abdomen in 58% cases. Tenderness in 43% cases. Tenderness was mostly either localised in RIF or generalised. Lump RIF was present in 26% cases and in all of these 26 cases it was localised in RIF. 6% cases had obliteration of liver dullness. Secondary to perforation peritonitis 14% cases had ascites.

Table 1: Distribution according to sign.

	Signs	No. of Patients	Percentage
GPE	Palor	56	56
	Lymphadenopathy: Hepatosplenomegaly	6	6
	Malnourished	56	56
Local Examination	Abdominal distension	58	58
	Tenderness	43	43
	Rigidity, guarding	14	14
	Visible bowel loops	10	10
	Lump RIF	26	26
	Obliteration of liver dullness	6	6
	Ascitis	14	14
	Doughy feel	14	14

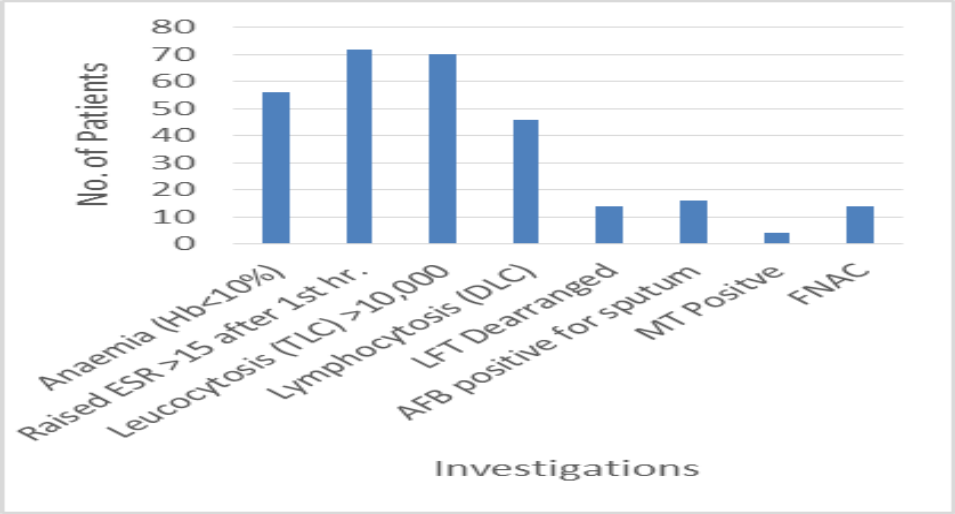
In graph 1, we found that the commonest complaint of patients was pain, in the present series 100% patients had pain. Pain was generally diffuse, vague and uncharacteristic, in order of frequency the symptoms are pain, vomiting, distension, loss of appetite, constipation, weight loss, fever, cough and gola formation.



Graph 1: Distribution according to symptoms

In graph2, the mean of haemoglobin concentration was 10.5 gm% the lowest level recorded in the present study was 6.0 gm% and the highest 13.5 gm%. Total leucocyte count had nothing specific to suggest. Lymphocytosis was in 46% cases. AFB positive for

sputum in 16% cases and M T positive in 4% cases. FNAC was done in cases having lump right iliac fossa. It was positive for tuberculosis in 10 cases and 4 cases had necrotic material with epithiloid granuloma.



Graph 2: Distribution according to investigations

X-ray chest was done in all patients. 36 cases at tubercular lesion in chest out of which 10 patients had active Koch's and 26 cases had old fibrotic lesion, 64 patients have normal chest X-ray. X-ray FPA was done in all patients but was informative in 52% cases, in 6% cases it revealed gas under diaphragm and multiple air fluid levels in 46% cases.

In table 2, we found that USG was done in 58% cases, in 79.3% cases it revealed dilated bowel loops, lump right iliac fossa in 41.3% and ascites in 13.79% enlarged mesenteric lymph node were found only in 6.8% and 20.68% had normal sonography.

Table 2: Distribution according to USG Finding

	USG Finding	No. of Patients	Percentage
Done	58	58	58
	Dilated bowel loops	46	79.3
	Lump RIF	24	41.3
	Ascitis	8	13.7
	Enlarged mesentry lymph node	4	6.8
	Normal	12	20.6
Not done	42	42	42

Intestinal disease comprised of strictures, ileo-caecal masses and perforations. Always this was accompanied with extra intestinal findings viz. lymph nodes, adhesions or tubercles. The commonest site of stricture formation was ilium, mostly strictures were multiple, other sites like jejunum and colon were also involved but always with ilialstricutres.

In Table 3, we found that post-operative complications present in 20 cases out of 64 cases.

Table 3: Distribution according to complication

	Complication	No. of Patients	Percentage
Local	Wound infection	8	12.5
	Faecal fistula	3	4.68
	Intestinal obstruction	2	3.12
	Brust abdomen	2	3.12
Systemic	Chest complication	2	3.12
	Cardiac complication	2	3.12
	Fever	1	1.56

Out of 64 cases 20 cases had complications and 4 patients died. The morbidity and mortality in this study were 31.25% and 6.2% respectively.

Discussion

The present study comprises of 100 cases which presented with acute as well as chronic tubercular abdomen admitted at J.L.N Hospital, Ajmer.

Abdominal tuberculosis is one of the commonest inflammatory bowel diseases in India and other tropical countries. In developed countries like England, USA, Germany abdominal tuberculosis mainly seen due to the arrival of the Asian immigrant and AIDS patients so that no part of earth can boast of a complete freedom from tuberculosis (Sapan, 1983).[5]

Tuberculosis usually affects the all age group, no age bar is untouched to this disease. In our study maximum number of patients (38%) belongs to the age group between 21-30 years. The youngest patients was 11 years old male and eldest was 70 years old female. 64 cases belonged to low-socioeconomic status and 26 belonged to middle class families and 10 cases belonged to higher social status. This is comparable with study of Dr. Bhansali [2](1978), Eggleston[6] (1983), Anand[7] (1956). Female to male ratio is 2:1 as also observed by Dutta and Gupta[8] (1968), Singhal[9] (1964). The cause of female predominance is ignorance, poverty, illiteracy and malnourishment.

The commonest finding in the study was distension of abdomen in 58% cases. Tenderness in 43% cases. Tenderness was mostly either localised in RIF or generalised. Lump RIF was present in 26% cases and in all of these 26 cases it was localised in RIF. 6% cases had obliteration of liver dullness. Secondary to perforation peritonitis 14% cases had ascites. The symptoms and signs of abdominal tuberculosis are non-specific and unless a high index of suspicion is maintained the diagnosis can be missed or delayed resulting in increased morbidity and mortality (Satyens and Price, 1993).[4]

We found that the commonest complaint of patients was pain in the present series 100% patients had pain. Pain was generally diffuse, vague and uncharacteristic, in order of frequency the symptoms are pain, vomiting, distension, loss of appetite, constipation, weight loss, fever, cough and gola formation. Das and Shukla[10] (1976) reported that umbilical area was the commonest site of pain, whereas Khoury et al.[11] (1978) noted that pain was commonly present in the right iliac fossa.

X-ray chest was done in all patients. 36 cases at tubercular lesion in chest out of which 10 patients had active Koch's and 26 cases had old fibrotic lesion, 64

patient have normal chest X-ray. X-ray FPA was done in all patients but was informative in 52% cases, in 6% cases it revealed gas under diaphragm and multiple air fluid levels in 46% cases.

In graph 7, we found that USG was done in 58% cases, in 79.3% cases it revealed dilated bowel loops, lump right iliac fossa in 41.3% and ascites in 13.79% enlarged mesenteric lymphnode were found only in 6.8% and 20.68% had normal sonography.These result are comparable to the finding of Dutta and Gupta[8].

In this present study we found that Out of 64 cases 20 cases had complications and 4 patients died. The morbidity and mortality in this study were 31.25% and 6.2% respectively. A similar study by Bhansali[2] and Kapoor reported mortality in their series 20% and 10% respectively. This can be attributed to the difference in management approach as Bhansali advocated emergency operation for patients with pneumoperitoneum only while others were operated from after an unsuccessful trial of conservative treatment.

Conclusion

We found that the commonest complaint of patients was pain, in the present series 100% patients had pain. Pain was generally diffuse, vague and uncharacteristic, in order of frequency the symptoms are pain, vomiting, distension, loss of appetite, constipation, weight loss, fever, cough and gola formation.

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