

'STUDY OF CLINICAL PROFILE OF ABDOMINAL TUBERCULOSIS WITH SELECTED CASES OF SURGICAL INTERVENTION'

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ABSTRACT:-BACKGROUND: Recent reports have suggested increased in incidence of abdominal tuberculosis (TB) worldwide, particularly in high risk groups, especially in developing countries. **OBJECTIVES:** The aim of this study is to review clinical spectrum of abdominal TB and surgical management of its complications. **METHODS:** The prospective review of all histopathologically proven cases of abdominal TB notified to our institution requiring surgical intervention during 2 year period. **RESULTS:** There were 28 patients with abdominal TB. Maximum incidence was found in 11-30 years (57%) with a median age of 30.14 (4-66) years and male to female ratio of 1:1.33. Pain being most common symptom (96%) while abdominal tenderness and anemia were the most common signs. None of the patient was HIV positive. Active pulmonary TB was present in 25% cases. Major complications of abdominal TB were intestinal obstruction (60%) and perforation peritonitis (21%). All 28 patients underwent surgery with 24 patients undergoing on an emergency basis and rest 4 electively. Mesenteric lymphadenopathy was present in 14 patients, 10 had strictures and underwent small bowel resection, isolated biopsy was done in 3, adhesiolysis was done in 5 and 5 had stricturoplasty. Right hemicolectomy, ileotransverse bypass, localized ileocecal resection, sigmoid colectomy were done in one patient each. AKT was given postoperatively to all patients. Morbidity rate was 32% and mortality rate was 17.86%. 21 patients recovered completely and 2 were lost in follow up. **CONCLUSION:** Abdominal tuberculosis affects young adults with female preponderance of low socioeconomic status, presenting as acute illness when complications develops otherwise it remains silent. With proper chemotherapeutic drugs and timely correct surgery for complications and supportive treatment the morbidity and mortality of abdominal tuberculosis can be reduced significantly.

INTRODUCTION: Tuberculosis is among ten leading cause of death. It is still rampant in developing countries. Abdominal tuberculosis is one of the most common sites of extrapulmonary involvement (11%). In developing countries like India it is mainly associated with poverty and malnourishment but in developed countries it is mainly associated with HIV.

The common malady with its protean clinical profiles and varied complications is a challenge to the clinical acumen and therapeutic skills of all clinician belonging to different disciplines of

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medicine. This study reports the incidence, presentation, outcome of surgery in abdominal tuberculosis to elucidate factors that might help surgeon to treat the potentially curable disease.

Thus we present a prospective study of 28 histopathologically proven patients conducted in IGGMC, Nagpur between a periods of 2003 to 2005 in the department of surgery, IGGMC, Nagpur.

MATERIALS AND METHODS: The patients in this study were taken prospectively from July 2003 to May 2005. These cases were admitted on emergency basis with acute or chronic abdominal symptoms requiring surgical management and excluding patients being managed conservatively with anti tubercular drugs and not requiring surgical management.

We reviewed 28 patients admitted in surgical ward requiring surgical intervention during the time period mentioned who were histopathologically proven to have abdominal tuberculosis. We assessed the history regarding age and sex distribution, modes of presentation, various investigations, site of involvement and type of surgical interventions performed as per merit of patient. The operative findings, complications of surgery and follow ups were observed.

RESULT: In our study youngest patient was 4 year old female child while the eldest patient was a 66 years old male. Maximum patients 8 (28.5%) were in age group (11-20) and (21-30). There was slight female preponderance with 16 females and 12 males of low socio-economic status.

Patients presented with varied presentations. With pain being the most common symptom (96%). Vomiting and fever were also the presentations. A large no of patients also presented altered bowel habits and abdominal distention. While tenderness, anemia and abdominal distention were present in majority.

Most patients presented with anaemia (96.42%). Neutrophilia was found in all patients while ESR above 10mm was raised in 16 (57.14%) patients. Only 15 (53.57%) patients were Mantoux positive. Anti TB IgG and IgM were raised only in 14(50%) patient whereas 1 patient had equivocal result. ELISA for HIV I and II was negative in all patients. Chest X-ray showed active pulmonary TB in 7 while old healed TB in 3 patients, whereas X-ray abdomen multiple air fluid levels in 17(60.71%) while gas under diaphragm in 5(17.86%). Barium study couldn't be done in 24 patients as they were operated on an emergency basis. Ultrasonography was done in all patients and CT scan was done in 2 patients which was suggestive of carcinoma of sigmoid and ascending but both later proved to be tuberculosis. Colonoscopy was done in 1 patient which was suggestive of sigmoid stricture due to tuberculosis.

The commonest site of involvement in abdominal tuberculosis was ileum in 17 (60%). Nodal involvement was in 14(50%). Around 14 (50%) patients had mesenteric lymphadenopathy while small bowel stricture was present in 10(35%).

All 28 patients were managed surgically with. 24 patients were operated on emergency basis and rest 4 on elective basis. Mesenteric lymphadenopathy being most common intraoperative finding in 50% patients with small bowel stricture found in 10 (36%) patients. Resection and anastomosis was done in 7 patients, stricturoplasty and right hemicolectomy with ileotransverse anastomosis in 5 patients each. Postoperative complication with burst abdomen in 3 with fecal and biliary fistula developed in 2 patients each.

Post operatively patients were managed on 9 months of anti tubercular drugs regimen.

Follow up data is available for 6 months of which 2 patients were lost in follow up.

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Five patients died in post operative period of which 2 patients died of operative complication like anastomotic leak and fistula, 2 due to underlying medical disease and 1 due to extensive respiratory failure due to extensive pulmonary tuberculosis.

DISCUSSION: Abdominal tuberculosis can occur in any age predominantly in younger age group with a mean age of 30 years. There was slight female preponderance. It's predominant in patients belonging to low socioeconomic strata.

Abdominal tuberculosis presents in different modes, i.e. acute, acute on chronic or chronic. The common malady with its protean clinical profiles and varied complications is a challenge to the clinical acumen and therapeutic skills of all clinician belonging to different disciplines of medicine. In our series, 27 cases (96%) presented with pain which is in comparison with Bhansali et al study with 94%. Also 24(85%) presented with vomiting and 10(35%) presents with fever while 30% patients in Tirelli et al study presented with vomiting and fever. Loculations of ascitic fluid, involvement of the mesenteric lymph node or matted bowel loops may present with lump in the abdomen. In our series 5(17%) presented with lump in abdomen while in Das et al study 20% presented with it.

Hematological study revealed anemia, leucocytosis. ESR was raised in 57% which is comparable with study of Prakash et al of 61%. Mantoux test was positive in 53% which is comparable with study of Manohar et al of 57.60%. But positive Mantoux test but it is of limited diagnostic tool because it does not differentiate active disease from previous

Not a single patient was found to be HIV positive in our series although study of Machado et al found 16.67% and Coppa et al study had 66.67% patients were HIV positive.

Radiological investigations are the mainstay of diagnosis of abdominal tuberculosis. In our study, chest X-rays showed evidence of pulmonary tuberculosis in 35.71% which is comparable with study of Manohar et al of 40.8% and Machado et al of 43.2%. While findings of tuberculosis (active or healed) on chest X-ray support the diagnosis of abdominal tuberculosis, a normal chest X-ray does not rule it out. In x ray abdomen erect, 17.86% patients had gas under diaphragm while 60.71% had multiple air fluid levels while in a study by Bhansali et al 7.19% had gas under diaphragm while 74.10% had multiple air fluid levels. Barium study was performed on 4 patients with 2(50%) patients diagnosing abdominal tuberculosis. While Das et al reported barium studies diagnostic in 63.04% cases.

USG abdomen was done in all 28 cases. Important use of ultrasonography in patients of abdominal tuberculosis is to provide guidance for FNAC needle. CT done in 2 patients was suggestive of malignant mass lesion one in ascending colon and another in sigmoid colon but histopathological report came out as intestinal Koch's. All the cases were proved histologically to have tuberculosis. Therefore the definite diagnosis of abdominal tuberculosis is mainly histological. Pre-operative diagnosis is difficult even in our country where it is common.

All our patients were managed with full course of antitubercular therapy. Regimens included antitubercular therapy for 9 months with rifampicin, INH and pyrazinamide and for 2 months followed by rifampicin and INH for next 7 months.

All 28 patients underwent definitive surgery. Resection and anastomosis of small bowel was performed in 25% patients which is comparable with Bhansali et al of 30%. Resection is the ideal

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procedure performed when long segment of intestine is involved by multiple strictures with or without perforation or inseparable adhesions.

Adhesiolysis was performed in 17.86% comparable with Bhansali et al study with 18% requiring it. Perforation closure was done in 7.14% comparable to Bhansali et al with 7.10%. Strictureplasty was performed in 17.86% while Gupta et al reported incidence of 36.36%. Right hemicolectomy with ileotransverse anastomosis was performed in 17.86% comparable to Bhansali et al 20.66%.

Post operative complications were common in emergency operated patients noted in 28.57% patients with 7.14% developing wound infection, 10.71% developing burst abdomen, 7.14% developed fecal fistula and another 3.57% developed biliary fistula. Fakhar et al reported a complication rate of 24.16% and M J Joshi reported a complication rate of 21.67%. 5 patients expired (17.86%) comparable with Fakhar et al and Machado et al reported an mortality rate of 22.2%. In our series 3 patients died due to complications of surgery and abdominal tuberculosis while 2 patients died due to medical diseases.

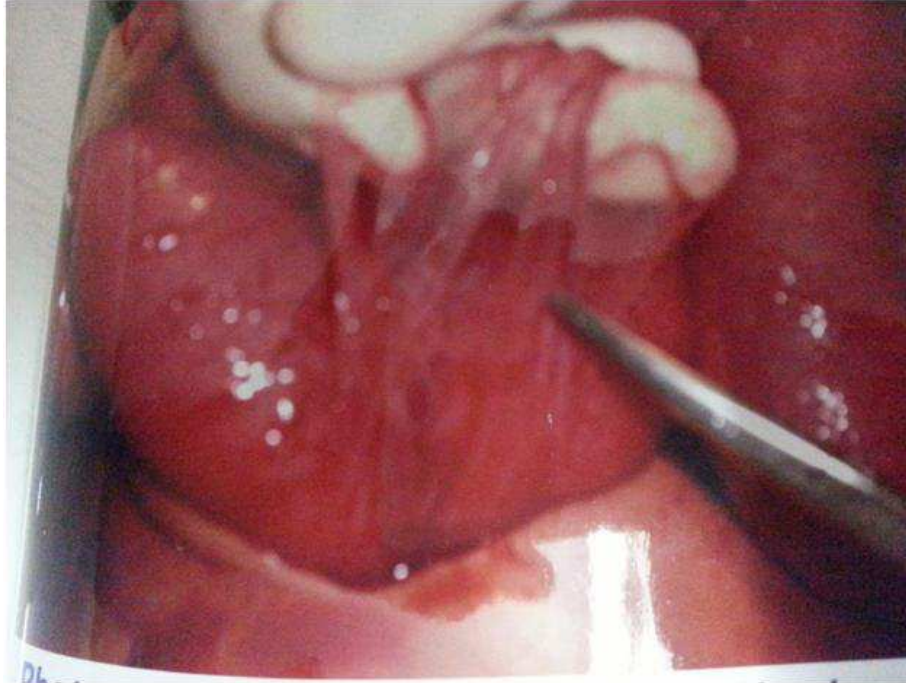
CONCLUSION: Abdominal tuberculosis affects young adults with female preponderance of low socioeconomic status, presenting as acute illness when complications develops otherwise it remains silent and may present as chronic illness. Nearly one third of the cases are associated with pulmonary tuberculosis. No single investigation is diagnostic in acute presentation. Surgical treatment is required in complications of abdominal tuberculosis, yet emergency surgeries carry considerable morbidity and mortality. With proper chemotherapeutic drugs and timely correct surgery for complications and supportive treatment the morbidity and mortality of abdominal tuberculosis can be reduced significantly.

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PHOTOGRAPH 1 : Showing adhesions due to abdominal tuberculosis



PHOTOGRAPH 2: Showing intestinal tubercles in abdominal tuberculosis



PHOTOGRAPH 3 : Showing resected ileum with stricture

