



**MULTIPLE SMALL BOWEL STRICTURES WITH PERFORATION IN  
A CASE OF ABDOMINAL TUBERCULOSIS**

\*<sup>1</sup>Satyanarayana Rao Sarangam Venkata and <sup>2</sup>Viswanath Nallapaneni

<sup>1</sup>Associate Professor, Dept of Surgery, Katuri Medical College and Hospital, Guntur-5222019, Andhra Pradesh, India.

<sup>2</sup>Assitant Professor, Dept of Surgery, Katuri Medical College and Hospital, Guntur-5222019.

Article Received on 22/12/2014

Article Revised on 16/01/2015

Article Accepted on 10/02/2015

**\*Correspondence for  
Author**

**Satyanarayana Rao**

**Sarangam Venkata**

Associate Professor, Dept  
of Surgery, Katuri Medical  
Collee Andhospital,  
Guntur-5222019, Andhra  
Pradesh, India.

**ABSTRACT**

We report a rare case of abdominal tuberculosis with multiple ileal strictures with perforation presenting as an acute abdomen at this hospital. A 50 year old Male came to casualty with complaints of vomiting, constipation, pain in abdomen since 02 days and fever with chills and rigor since 01 day. Abdominal examination revealed distention and absent bowel sounds. Radiography of the abdomen showed gas under the diaphragm. Hence emergency laparotomy was done which revealed a single perforation and two strictures in the

terminal ileum. Resection of the diseased segment of the ileum including the strictures with end to end anastomosis done.

**KEYWORDS:** Laparotomy, perforation, stricture and tuberculosis.

**INTRODUCTION**

Tuberculosis is endemic in many parts of developing countries including India and its incidence is increasing worldwide due to the emergence of multi drug resistance bacilli and H.I.V–T.B infection. The WHO estimates 8.27 million new cases of tuberculosis in 2014-15. Abdominal tuberculosis is sixth commonest form of extra pulmonary tuberculosis.<sup>[1]</sup> It constitutes about 12% of all cases and about 1-3% of total tuberculosis cases.<sup>[2]</sup> It can involve gastrointestinal tract, peritoneum, lymph node and solid viscera including the liver, spleen and the pancreas. The commonest site of involvement of GI tract is ileo-caecal region. Perforation is a serious and uncommon complication of abdominal tuberculosis.<sup>[3]</sup> As a rare

entity we present a case of abdominal tuberculosis with multiple ileal strictures and perforation at Katuri Medical College and Hospital, GUNTUR, Andhra Pradesh.

### CASE REPORT

A 50 year old male came to Casualty of this hospital with complaints of vomiting and constipation since 03 days, pain in abdomen since 02 days and fever with chills and rigors since 01 day. The abdominal pain was insidious in onset and gradually progressive, intermittent and pricking in nature without any aggravating and relieving factors and radiated towards loins and back bilaterally. He had 02 episodes of non-projectile, non-bilious vomiting that contained food particles, not mixed with blood. Past history was unremarkable. He was not a known case of Hypertension, Diabetes mellitus and Koch's disease. He is a chronic alcoholic and smoker since 20yrs. On examination, Patient was conscious, cooperative and coherent. He was average built, moderately nourished and mildly dehydrated. The pulse rate was 90/min and Blood pressure 110/70 mm Hg. Cardio respiratory examination was unremarkable. Abdominal examination revealed distention with generalized abdominal tenderness but there was no organomegaly with absent bowel sounds. Abdominal sonogram revealed free fluid in abdomen with thick internal echoes.



**“Fig.1”:**X-ray of abdomen in erect posture showed gas under the diaphragm suggestive of hollow viscus perforation.

Laboratory investigations revealed total leukocyte count 4000/mm<sup>3</sup>, serum amylase 117 U/L, S.creatinine 1.4mg% and S.potassium 3.4meq/l.

Patient underwent emergency laparotomy which showed bile stained fluid with pus flakes over the bowel loops, congested ileum with adhesions to the anterior peritoneum. After ileum

was freed, two strictures of 10 cms apart were noted in the distal ileum. The proximal stricture was about 40cms and distal stricture was about 30cms from the ileo-caecal junction. Further examination demonstrated a single perforation close to the proximal stricture. The rest of the abdomen was more or less normal. Hence resection of the ileal loop including the two strictures with 5cms proximal and distal healthy margin and ileo-ileal anastomosis was done.



**”Fig 2”**: showing 02 strictures in the terminal ileum



**”Fig 3”**: showing perforation at proximal stricture i.e 40cms from the ileo caecal junction.

Cut section of gross specimen showed ulcerated congested mucosa at the stricture site. Resected segment of the specimen was sent for histopathological examination which showed well formed granulomas composed of central caseous necrosis surrounded by lymphocytes, epithiloid cells and plenty of Langerhans giant cells which are suggestive of tuberculosis.

The post-operative period was uneventful. After histopathology confirmation the patient has been started on anti tubercular drugs as per R.N.T.C.P guidelines. Patient was then discharged and advised for follow up regularly.

## DISCUSSION & CONCLUSION

The aetiopathogenesis of abdominal TB is usually linked to hematogeneous spread from a pulmonary focus acquired during a primary infection in childhood. Another possible mechanism could be due to ingestion of the bacilli, which pass through the Peyer's patches of the intestinal mucosa and are transported by the macrophages to the mesenteric lymph nodes via the lymphatics. Conditions such as malnutrition, alcoholism, diabetes, chronic renal failure immune suppression and AIDS increase the risk of reactivation. The symptoms and signs of abdominal involvement vary with the site of involvement, the type of lesion and the mode of presentation. Patients can present with fever, weight loss, abdominal mass, ascites, diarrhea, malabsorption, features of intestinal obstruction and peritonitis.

Abdominal tuberculosis is the sixth commonest extra pulmonary form after lymphatic, genitourinary, bone and joint, miliary and meningeal tuberculosis. Three types of intestinal lesions are commonly seen i.e ulcerative, stricturous and hypertrophic. Cicatrical healing of ulcerative lesions results in strictures and can cause acute or sub-acute intestinal obstruction. Intestinal perforation is a relatively uncommon but a serious complication of abdominal tuberculosis occurring in 1-15% of patients.<sup>[4-6]</sup> Tuberculous perforations are predominantly solitary and located immediately proximal to the site of stricture; although there are reports of multiple perforations they are usually uncommon.<sup>[7]</sup> In a study the terminal ileum was the site of perforation in 54.54% of the cases and the clinical features of perforation were consistent with those of generalized peritonitis in 72.72% of the cases. The low incidence of tuberculous perforation is due to reactive fibrosis of the peritoneum and formation of adhesions with adjacent tissues.<sup>[8]</sup> Most of the perforations were solitary and located in the ileum. Perforations were present both proximal to and at the site of the stricture.<sup>[9]</sup> Multiple perforations occur in 40% of patients and are associated with poor prognosis.<sup>[10]</sup>

Ascitic fluid adenosine deaminase (ADA) activity has been proposed as a useful diagnostic test for abdominal TB especially in countries with a high incidence of TB and in high risk patients, Ultrasonography (USG) of the abdomen is a useful initial investigation, with characteristic finding that include low attenuation lymphadenopathy, omental or ileocaecal inflammatory mass. FNAC of lymph nodes or a solid organ lesion is a useful diagnostic tool due to its safety and rapid definitive diagnosis of tubercular granulomas. C.T scan can be carried out in case of inconclusive U.S examination which can show high-density ascites and caseous necrosis of lymph nodes.

Crohn's disease should be differentiated from abdominal TB due to the harm associated with steroids and immune modulatory agents. The combination of these agents would have adverse consequences in cases of abdominal TB misdiagnosed as Crohn's disease.<sup>[11]</sup>

## CONCLUSION

Patients with abdominal tuberculosis may present with features of acute abdomen due to intestinal obstruction and perforation or both as reported in our case. Radiology and histopathological examination are highly useful modalities for diagnosis. Antitubercular drugs are widely accepted as the mainstay of treatment of abdominal TB but complications (e.g. stricture, perforation, peritonitis) necessitate surgical intervention.

## REFERENCES

1. Flores-Álvarez E, Tello-Brand SE, López-López F, Rivera-Barragán V. Peritoneal tuberculosis: Report of seven cases. *Cir Ciruj*, 2010; 78: 63-66.
2. Sheer TA, Coyle WJ. Gastrointestinal tuberculosis. *Curr Gastroenterol Rep.*, 2003; 5: 273-8.
3. Sarrami AH, Sharifi M, Ahsan M, Afsharmoghaddam N. Multiple intestinal perforations as a primary manifestation of abdominal tuberculosis in a HIV infected patient. *JSCR*, 2010; 10: 7.
4. Bhansali SK, Desai AN, Dhaboowala CB. Tuberculous perforation of the small intestine. A clinical analysis of 19 cases. *J Assoc Physicians India.*, 1968; 6: 351-5.
5. Gilinsky NH, Marks IN, Kottler RE, Price SK. Abdominal tuberculosis. A 10-year review. *S Afr Med J. [Research Support, Non-U.S. Gov't].*, Nov 1983; 64(22): 849-57.
6. Ahmad M. Acute tuberculous perforation of the small intestine, with reports of four cases. *J Indian Med Assoc.*, 1962; 38: 317-21.
7. Prout WG. Multiple tuberculous perforations of ileum. *Gut.*, 1968; 9: 381-2.
8. Sanai FM, Bzeizi KI. Systematic review: tuberculous peritonitis presenting features, diagnostic strategies and treatment. *Aliment Pharmacol Ther*, 2005; 22: 685-700.
9. Guntani A, Kakizoe S, Kakizoe H, Kakizoe Y, Kakizoe T, Kakizoe K, et al. Peritoneal tuberculosis with gastric cancer: a case report. *West Indian Med*, 2006; 55(5): 358-359.
10. Dasgupta A, Singh N, Bhatia A. Abdominal tuberculosis: A histopathological study with special reference to intestinal perforation and mesenteric vasculopathy. *J Lab Physicians*, 2009; 1: 56-61.
11. Sibartie V, Kirwan WO, O'Mahony S, Stack W, Shanahan F. Intestinal tuberculosis mimicking Crohn's disease: lessons relearned in a new era. *Eur J Gastroenterol Hepatol.*, 2007; 19: 347-9.