



INTESTINAL TUBERCULOSIS WITH AN IMPENDING PERFORATION: A CASE REPORT

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ABSTRACT

Introduction: Abdomen is involved in 11% of the patients with extra pulmonary tuberculosis. The most common site involved is ileocaecal region, other sites of involvement are ascending colon, jejunum appendix, duodenum, stomach, esophagus, sigmoid colon. Intestinal tuberculosis presents in three forms, i.e., ulcerative, ulcero-hypertrophic and fibrous (stricture) type. Peritoneal involvement may be present as ascites, loculated, plastic or purulent forms.[1]

Case Report: Reporting a case of 13 yrs. old female patient came with c/o Pain in abdomen for 3 days associated with vomiting 7-8 episodes (Bilious), not passing flatus and motion for 2 days. P/A findings - Distended, tenderness over whole abdomen, Bowel sounds absent, not passing flatus and motion. CECT Whole Abdomen showed infective etiology likely tubercular. Exploratory laparotomy was performed on clinical suspicion of abdominal tuberculosis. 1x1cm perforation was found in proximal ileum. Ileostomy was made.

Conclusion: Tuberculosis is a grave global disease. Emergency surgeons should be familiar with the challenges encountered in diagnosing abdominal tuberculosis. Experienced surgeons may decide for an emergency laparoscopy or laparotomy and may get surprised by the operative and pathological findings confirming the diagnosis. [2]. A study conducted by Dr Bali shows the commonest intraoperative finding encountered was an ileal perforation followed by multiple small bowel perforations, solitary stricture of the small bowel with perforation, ileo-caecal mass, adhesions or bands, single or multiple strictures, stricture with impending small bowel perforation. [3]

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INTRODUCTION

Tuberculosis (TB) is a life threatening disease which can virtually affect any organ system [4]. According to WHO report 2013, there were an estimated 8.6 million annual incidence of Tuberculosis globally and 1.3 million people died from disease in 2012[5]. India has the world's largest TB cases which are around 26% of the world TB cases, followed by China and South Africa. There were an estimated 0.45 million new reported cases of MDR TB worldwide in 2012. About half of these cases were in India, China and Russia. In addition, there is increase in the incidence of tuberculosis in developed countries due to increasing prevalence of immunocompromised individuals mainly due to acquired immunodeficiency syndrome (AIDS) pandemic, immigrant's population, deteriorating social conditions and cutbacks in public health services [6-8].

The prevalence of tuberculosis has increased in both immunocompetent and immunocompromised and it can affect virtually any organ. The primary site of tuberculosis is usually the lungs, from which it can get disseminated into other parts of the body as extra pulmonary TB. The other routes of spread can be due to contiguous involvement from adjacent tuberculous lymphadenopathy or primary involvement of extra pulmonary organ.

Nonspecific clinical and radiological features and high degree of suspicion makes the diagnosis of extra pulmonary TB even more difficult and challenging.. The abdominal tuberculosis, which is not so commonly seen as pulmonary TB, can be a cause for significant morbidity and mortality. It is usually diagnosed at a later stage due to its nonspecific clinical presentation [9]. Approximately 15%-25% of cases with abdominal TB have concomitant pulmonary TB [10,11]. Hence, it is quite important to identify these lesions with high index of suspicion especially in endemic areas.

The abdominal tuberculosis usually occurs in 4 forms, which are; tuberculous lymphadenopathy, peritoneal tuberculosis, gastrointestinal (GI) tuberculosis and visceral tuberculosis involving the solid organs. Usually a combination of these findings can occur in any individual patient. Generally, CECT Whole Abdomen appears to be the imaging modality of choice in the detection and assessment of abdominal TB, other than gastrointestinal TB. Barium studies remain superior for demonstrating intestinal mucosal lesions [12].

Case report

Reporting a case of 13 yrs old female patient came with C/o Pain in abdomen for 3 days associated with Vomiting 7-8 episodes which was bilious in nature. Patient also complaints of not passing flatus and motion for 2 days. Pain was generalised and was dull aching in nature, progressively

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worsening not relieved by taking medication associated with non projectile bilious vomiting. Patient had history of fever. Patient also had history of decreased appetite.

O/E – Patient was thin built, weighing 28kgs. Patient looked malnourished, pale with sunken eyes. Vitally patient had tachycardia with Pulse-141/min, Blood Pressure -110/71, Spo2-96% on room air.

Per Abdomen findings-Abdomen was Distended with generalized tenderness over whole abdomen, Guarding present over infra umbilical region with no rigidity. Patient had no bowel sounds and was not passing flatus and motion Per Rectal Examination-Normal Anal tone, No Ballooning with presence of multiple fecoliths which were removed.

X Ray FPA was performed in supine and erect position which was suggestive of Multiple Air Fluid levels

Blood investigations were run and were as follows
Hb - 12.8g/dl, TLC – 11,300, PLT - 333×10^3 Neutrophil – 81.8%
Na - 134/K - 3.3/Cl - 98
Serum Creatinine - 1.7mg/dl,
ESR -28
Serum Bilirubin Total - 1.1 mg/dl
Serum Bilirubin Direct- 0.7mg/dl
SGOT – 32.3U/L
SGPT- 12.4U/L
ALK – 136.8U/L

CECT Whole Abdomen was done which was suggestive of – Proximal Mid ileal loops stricture in left side of abdomen at infraumbilical level with collapsed distal ileal loops, moderate ascites and omental soft tissue stranding and multiple mesenteric and retroperitoneal lymph node one of the largest in portocaval region measuring approx 11-12mm in short axis – likely infective (tubercular) etiology.

Mild Hepatomegaly

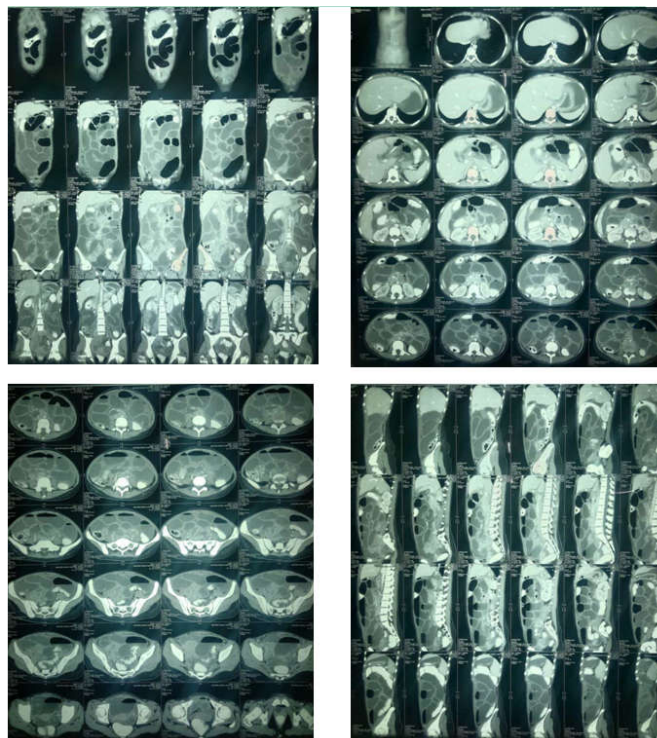
Patient was kept NBM with CRTS and was catheterized. Patient was resuscitated with IV fluids. All routine investigations were sent including complete blood counts, liver function test, renal function tests and serum electrolytes.

Operative findings

Exploratory laparotomy was performed Bowel loops were adherent and pus flakes were present. A 1x1cm perforation was present in the proximal ileum. Ileostomy was done



Radiograph of the abdomen showing multiple air-fluid levels



Contrast Enhanced CT scan of the Whole Abdomen



Intraoperative findings of the patient

DISCUSSION

In our case depending upon the age of the patient and deteriorating condition of the patient it was decided to go for the surgical procedure and reduce the morbidity and mortality rate. Stoma closure was delayed for the patient as she had not gained appropriate weight and was not fit for the surgery. After the stoma closure patient responded well and now she has gained weight by 10kgs and she is recovering well. Given the diverse presentation and characteristics of abdominal TB, no definite surgical procedure can be regarded as the standard of care.

Hence, we may say that the appropriate surgical procedure has to be decided by the operating surgeon based on the performance status and general condition of the patient at the time of surgery, the site and extent of the disease and the expertise of the surgeon. Severe complications of intra-abdominal tuberculosis can be avoided if adequate intervention

is provided in a timely manner. However, early diagnosis of intra-abdominal tuberculosis is challenging.

Diagnosis of abdominal TB is often hampered by nonspecific symptoms like abdominal pain accompanied by nausea and a change in Bowel habits. Radiological findings are mostly nonspecific, as intestinal tuberculosis can mimic inflammation, infection, or malignancies [13]. In particular, the distinction between inflammatory bowel disease and abdominal TB infection remains a diagnostic challenge [14].

Contrast-enhanced CT is the recommended imaging Tool in abdominal TB. Abdominal lymphadenopathy, short-segment strictures with symmetrical concentric wall thickening with homogeneous contrast enhancement are the most common findings [15], while heterogeneous asymmetrical and focal thickening is usually associated with malignant neoplasia [16]. Infiltration of the mesenteric fat is associated more with Crohn's disease than with abdominal TB infection.

Different authors and researchers, Charokar K, Sadia J and Ali N have suggested and reported a multitude of surgical procedures in the management of abdominal tuberculosis but it has been rightly stated by Sabooni K. that given the diverse presentation and characteristics of abdominal tuberculosis, no definite protocol can be regarded as the standard of care. Hence, we May opine that the appropriate surgical procedure and decision has to be taken by operating surgeon who has to decide based on the performance status and general condition of the patient at the Time of surgery, the site and extent as was done in this case.

CONCLUSION

Abdominal tuberculosis is a disease entity which is commonly encountered in the surgery emergency in our part of the world. Under-nourishment and malnutrition plays a very important role in the disease progression and the outcome. No surgical procedure has been recommended as the standard of surgical care due to the wide spectrum of the disease. As abdominal tuberculosis is uncommon in the developed world, it has not attracted the amount of attention it deserves in the literature. We our presenting our case report to highlight the burden and graveness of abdominal tuberculosis in the developing world and hence we suggest that more studies, with larger patient numbers, be conducted on abdominal tuberculosis to have a standardized management protocol.

Bowel wall perforations due to intestinal TB are associated with high mortality, thus requiring rapid diagnosis and therapy. However, diagnosis of abdominal TB is challenging due to nonspecific clinical and radiological Signs and its paucibacillarity, which reduces the sensitivity of microbiological methods. Impaired bowel function By Mycobacterium tuberculosis might lead to complications such as presented in this case like ileus or perforation, as well as malabsorption requiring parenteral administration of Anti-tuberculosis therapy. A combined approach of surgery and antitubercular therapy led to complete cure of this case

References

1. Pravin Rathi et al. J Assoc Physicians India. 2016 Feb.
2. P, Kothiya PK, Ansari F, et al. Clinical Presentation and surgical management of Abdominal tuberculosis at my hospital, Indore. J. Evolution Med. Dent. Sci. 2019;8(49):3711-3714, DOI:10.14260/jemds/2019/803
3. Bali RS, Jain R, Zahoor Y, Mittal A. Abdominal tuberculosis: a surgical Emergency. Int J Res Med Sci 2017;5:3847-50 Addison NV. Abdominal tuberculosis-a disease Revived. Ann R CollSurg Engl. 1983;65:105-11.
4. Charokar K, Garg N, Jain AK. Surgical management of Abdominal tuberculosis: a retrospective study from Central India. IntSurg J 2016;3(1):23-31.
5. Sadia J, Mehmood N, Khan NM. Surgical management of Acute presentation and outcome of patients with Complicated abdominal tuberculosis. J Rawalpindi Med Coll (JRMCC) 2016;20(2):108-12.
6. Sharma MP, Bhatia V. Abdominal tuberculosis. Indian J Med Res 2004;120(4):305-15.
7. Ali N, Hussain M, Israr M. Tuberculosis as a cause of small Bowel obstruction in adults. Gomal J Med Sci 2011;9(2):233-5.
8. Sabooni K, Khosravi MH, Pirmohammad H, et al. Tuberculosis peritonitis with features of acute abdomen In HIV infection. Int J Mycobacteriol 2015;4(2):151-3.
9. Rosado E, Penha D, Paixao P, et al. Abdominal tuberculosis Imaging findings. Educational exhibit ECR. 2013: C-0549.
10. Mukewar S, Mukewar S, Ravi R, et al. Colon tuberculosis: Endoscopic features and prospective endoscopic followup after anti-tuberculosis treatment. ClinTransl Gastroenterol 2012;3(10):e24.
11. Horvath KD, Whelan RL. Intestinal tuberculosis: return of An old disease. Am J Gastroenterol 1998;93(5):692-6.
12. Akhan O, Pringot J. Imaging of abdominal tuberculosis. EurRadiol 2002;12(2):312-23
13. Abu-Zidan FM, Sheek-Hussein M. Diagnosis of abdominal tuberculosis: lessons learned over 30 years: pectoral assay. World J Emerg Surg: WJES. 2019;14:33.
14. Kedia S, Das P, Madhusudhan KS, Dattagupta S, Sharma R, Sahni P, Makharia G, Ahuja V. Diferentiating Crohn's disease from intestinal tuberculosis. World J Gastroenterol. 2019;25(4):418-32.
15. Kalra N, Agrawal P, Mittal V, Kochhar R, Gupta V, Nada R, Singh R, Khandelwal N. Spectrum of imaging findings on MDCT enterography in patients with small bowel tuberculosis. Clin Radiol. 2014;69(3):315-22.
16. Fernandes T, Oliveira MI, Castro R, Araújo B, Viamonte B, Cunha R. Bowel wall thickening in CT:simplifying the diagnosis. Insights Imaging. 2014; 5(2):195-208.

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