A Surgical Experience of Managing Abdominal Tuberculosis – What's New

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ABSTRACT

Introduction: Abdominal Tuberculosisin all its grandeur still rules the roost in third world countries like ours. Themainobjectiveofthis studywastoidentify the changes that may have occurred over time in the presentation and treatment of this disease.

Material and method: This was a prospective study on40patientsadmittedfromOctober2014toSeptember2015in the surgery wards of our institution. Only thosepatients in whom abdominal tuberculosis was confirmed by imaging or histopathology were included in this study. A meticulous record of thedemography,presentation, investigations and treatment was maintained in a previously prepared proforma for this purpose. All relevant data was analyzed using SPSS software version 17.

Results: 24(60%) patients were males and 16(40%) were females with ages ranging from 11-60 years. All patients belonged to a low socioeconomic group. 14(35%) patients presented in the emergency as complete intestinal obstruction, six(15%) had incomplete bowel obstruction and four(10%) presented with bowel perforation, all diagnosed on plain x-ray abdomen. The rest 16(40%) patients were diagnosed on abdominal ultrasonographic findings of ascites, ileocaecal mass /abscess, thickened terminal ileum. Only eight(20%) required CECT for further clarification. 12(30%) of all patients were treated conservatively. Adhesiolysis in eight(20%) was the commonest surgical procedure performed.

Conclusion: Abdominaltuberculosis in our region should always be considered in patients presenting with small bowel obstruction, or chronic ascites of unknown etiology. Antitubercular treatment 2 (HRZE) /4(HR)for a minimum of 6 months is all that is required in most patients.

Keywords: abdominal tuberculosis, diagnosis, management

INTRODUCTION

Abdominal Tuberculosis by definition includes the involvement of the gastrointestinal tract, peritoneum, the mesentery and its nodes. Solid viscera, liver, including spleen and pancreas, can also be rarely involved.[1] 11-16% of all cases of tuberculosis are extrapulmonary of which 3-4% are abdominal tuberculosis.[2] Primary tuberculosis of intestine without antecedent or associated pulmonary tuberculosis is also fairly common.[3] Both the incidence and severity of abdominal tuberculosis are expected to increase with the increasing incidence of HIV infection in India.[4] The present study was carried out to review the clinical spectrum of the disease, diagnostic dilemmas and surgical treatment of the same in our economically deprived region.

MATERIAL AND METHODS

This prospective study on Abdominal Tuberculosis was conducted from October 2014 to September 2015.A total of 40 patients with proven abdominal tuberculosis were included in this study. All patients were evaluated with a meticulously taken history and thorough physical examination. Investigations included a complete blood count (Hb, TLC, DLC), ESR, LFTs, Mantoux test, Chest X-ray PA view, Abdominal x-ray AP view and abdominal ultrasonography. Laparoscopy, ascitic fluid examination and Computed tomography were carried out in selected patients as per requirement. In cases where a tissue specimen was available, a definitive histo-pathological lesion characteristic of tuberculosis (presence of epithelioid granuloma, caseation, Langhan's giant cells) in the diseased abdominal segment or in the draining lymph nodewas taken as confirmatory evidence of the disease. All patients were put on anti-tubercular therapy 2 (HRZE) /4(HR)for a minimum of 6 months as part of conservative treatment or soon after surgery. All patients are on follow-up and will remain so for at least one year following completion of therapy.

Exclusion Criteria: Genitourinary Tuberculosis.

Ethical consideration: Due permission was taken from the hospital ethical committee to carry out this study.

RESULTS

Out of 40 patients included in this study,24(60%)were males and 16(40%) were females with ages ranging from 11-60

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years. (Figure 1). All patientsbelongedtoa lowsocioeconomicgroup,with anaveragefamilyincomeofRs2000/-permonth. The commonest presentation was of pain in the abdomen 26(65%) and abdominal distension 20(50%). Only 6(15%) patients had an abdominal lump (Table 1).In the emergency, complete small bowel obstruction was seen in 14(35%) patients. Other emergency presentations were incomplete bowel obstruction in six(15%) and ileal perforation at or above a complete stricture in four(10%) patients (Figure 2).Six (15%)patientswereanaemicwith hemoglobin below8gm% and eight(20%) had araisedESR.Asciticfluidanalysis revealing a high lymphocytecount and adenosine deaminase above 36IU/L was diagnostic in four(10%) patients.Radiologicalfindingson achest X-rayrevealed associated pulmonary tuberculosis in 2(5%) patients. Intestinal obstruction and perforation was diagnosed on a plain X-ray abdomen. Abdominal ultrasonography findings of ascites, ileocaecal mass/abscess, thickened terminal ileum were used to diagnose 16(40%) patients. CECT was required in eight (20%) patients to clarify diagnostic dilemmas. Ileo-ileal intussusception in one patient, cholelithiasis in 8(20%) and splenic abscess in one patient were other incidental findings. 12(30%) of all patients were treated conservatively. Adhesiolysis in eight(20%) was the commonest surgical procedure performed. Six (15%) required drainage of an intra-abdominal abscess. Ileostomy exteriorization of the perforations in four (10%) and primary resection anastomsis for strictures in the terminal ileum in four (10%) patients were the other common procedures performed. Six (15%) patients underwent diagnostic laparoscopy with peritoneal, mesenteric lymph node or omental biopsy (Figure 3). 24cm of the terminal ileum and the ileocaecal junction was the only area involved in our study. 10(25%) patients were diagnosed on histopathological findings of epithelioid granuloma, caseation,Langhan's giant cells in mesenteric lymph nodes peritoneal and intestinal biopsy. Wound infection in 12(30%) patients was the commonest postoperative complication. Two (5%) patients developed incisional hernias. No patient was HIV positive. The average hospital stay was 15 days. There was no mortality in this series. All patients were put on anti-tubercular therapy 2 (HRZE) /4(HR)for a minimum of 6 months and will remain on follow-up for a minimum of one year.

Symptoms and Signs	Number of patients	%
Pain In Abdomen	26	65
Abdominal Distension	20	50
Vomiting	18	45
Constipation	14	35
Fever	6	15
Abdominal Lump	6	15
Ascites	4	10
Loss of Appetite	4	10

Table-1: Symptoms and signs of abdominal tuberculosis (N=40)

DISCUSSION

Abdominal tuberculosis is the sixth commonest extra pulmonary site for the disease.[5] Abdominal tuberculosis can occur at any age and the mean age of 35 years in the present study reflects the observations of another study from Pakistan where the mean age was 28.21 ± 5.75 years.[6] Majority of patients in our study belonged to a poor socio-economic class. Poor nutritional status, lack of health facilities and poor pasteurization of milk are contributors to this problem.[7] Abdominal pain was the commonest presentation in our patients (65%) as has been recorded by others.[8] Intestinal obstruction seen in20(50%) patients was the commonest cause for which the patient presented in the emergency a finding

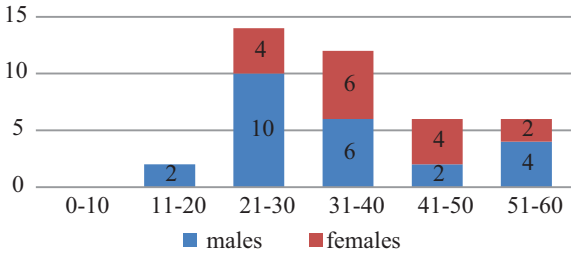

Figure-1: Age and Sex distribution in abdominal tuberculosis

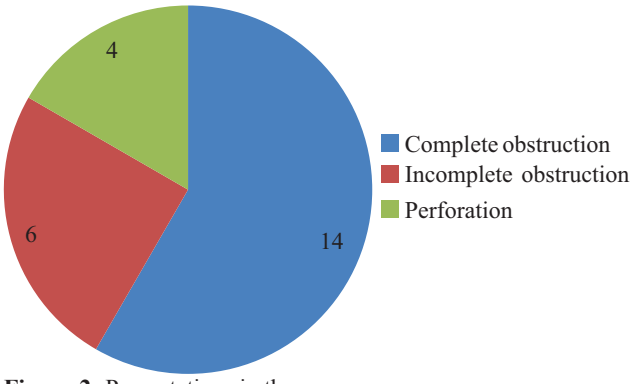

Figure-2: Presentations in the emergency

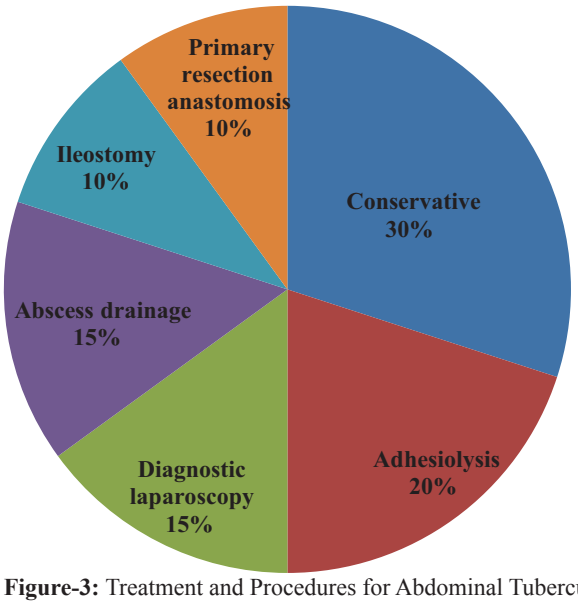

Figure-3: Treatment and Procedures for Abdominal Tuberculosis

corroborated in other studies.[9] This is in sharp contrast to that reported in the western literature where abdominal tuberculosis as a cause of mechanical obstruction is very rare.[10] Ileal perforations usually occur at or proximal to a stricture the same seen in our patients.[11] The terminal ileum and ileocaecal regions were the only areas involved in our study and is in contrast to other studies where other areas of the gut albeit rarely were also involved.[12] Pulmonary tuberculosis was an associated finding in only two(5%) of our patients and only one was sputum AFB positive. An Indian study had 34.78% associated pulmonary tuberculosis.[13] Ultrasonography was used to diagnose 16(40%) of our patients whereas only 4% were diagnosed on ultrasound imaging in another study from Pakistan.[14] Adhesiolysis in eight(20%) was the commonest surgical procedure performed. Intrabdominal abscess drainage in six(15%), ileostomy exteriorization of the perforations in four (10%) and primary resection anastomsis for strictures in the terminal ileum in four (10%) patients were the other common procedures performed. Ileostomy was the commonest procedure in a study from Pakistan.[15] All patients were put on anti-tubercular therapy 2 (HRZE) /4(HR) for a minimum of 6 months which is the current recommendation.[16] No patient had associated HIV infection which does not confirm to other studies.[17]

CONCLUSION

Abdominal tuberculosis should always be considered in the differential diagnosis of patients with altered bowel habits, small bowel obstruction and ascites of unknown origin in our region. Tubercular adhesions are the commonest cause of small bowel obstruction in the emergency. Exteriorization of the perforation may be safer in the setting of faecal peritonitis. A six month regime of 2(HRZE)/4(HR) is the current recommendation for antitubercular treatment of abdominal tuberculosis.

REFERENCES

1. Uma Debi, Vasudevan Ravisankar, Kaushal Kishor Prasad, Saroj Kant Sinha, and Arun Kumar Sharma.Abdominal tuberculosis of the gastrointestinal tract: Revisited.World J Gastroenterol. 2014; 20:14831–14840.
2. Sharma SK, Mohan A. Extrapulmonary tuberculosis. Ind J Med Res 2004;124:316-53.
3. M.P. Sharma & Vikram Bhatia.Abdominal tuberculosis. Indian J Med Res 2004;120: 305-315
4. SwaminathanS, Nagendran G.HIV and tuberculosis in India. J Biosci. 2008;33:527-37.
5. Seema Awasthi, Manoj Saxena, Faiyaz Ahmad, Ashutosh Kumar, and Shyamoli Dutta.Abdominal Tuberculosis: A Diagnostic Dilemma.J Clin Diagn Res. 2015;9:EC01–EC03.
6. Muhammad Saaiq, Syed Aslam Shah, Muhammad Zubair. Abdominal Tuberculosis: Epidemiologic profile and management experience of 233 cases J Pak Med Assoc 2012; 62:704-7.
7. Naseer Ahmed Baloch,Manzoor Ahmed Baloch,Fida Ahmed Baloch.A Study of 86 cases of Abdominal Tuberculosis. Journal of Surgery Pakistan (International) 2008;13:30-32
8. S Rai, WM Thomas.Diagnosis of abdominal tuberculosis: the importance of laparoscopy. J R Soc Med. 2003;96:586–588.
9. Phillipo L Chalya, Mabula D Mchembe, Stephen E Mshana, Peter Rambau, Hyasinta Jaka, Joseph B Mabula Tuberculous bowel obstruction at a university teaching hospital in Northwestern Tanzania: a surgical experience with 118 cases. World Journal of Emergency Surgery 2013, 8:12
10. Miller G, Boman J, Shrier I, Gordon PH. Etiology of small bowel obstruction.Am J Surg. 2000;180:33-6
11. Alakananda Dasgupta, Navjeevan Singh, and Arati Bhatia.Abdominal Tuberculosis: A Histopathological Study with Special Reference to Intestinal Perforation and Mesenteric Vasculopathy.J Lab Physicians. 2009;1:56–61.
12. YR Sharma. Abdominal tuberculosis-a study of 25 cases.Khatmandu University Medical Journal 2003;2:137-141.
13. Abhijit Mandal, Sibes Kumar Das, Tapan D Bairagya. Presenting Experience of Managing Abdominal Tuberculosis at a Tertiary Care Hospital in India. J Glob Infect Dis. 2011; 3: 344–347.
14. M R. Khan, T R. Khan, K.M.I.Pal. Diagnostic Issues in Abdominal Tuberculosis. JPMA. 2001;51:138
15. Ghulam Asghar Channa, Muhammad Ali Khan. Abdominal Tuberculosis "Surgeons Perspective". Journal of Surgery Pakistan 2003; 8: 18-22
16. Irene G. Sia, Mark L. Wieland. Current Concepts in the Management of Tuberculosis. Mayo Clin Proc. 2011 Apr; 86:348–361.
17. Sandhya P Iyer, Kabeer Umakumar, Amol Mahajan. Impact of HIV Infection on Outcome of Abdominal Tuberculosis. Bombay Hospital Journal 2008;50: 553-559

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