ORIGINAL ARTICLE

Abdominal Tuberculosis: Presentation and Diagnosis: A JMCH Study

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Abstract:

Objective: This prospective study aimed to determine the significance of various investigations in the diagnosis and management of abdominal tuberculosis.

Design: Descriptive, prospective analysis.

Settings and Duration: This study was conducted in the department of surgery; Jinnah Medical College Hospital Korangi, Karachi from April 2008 to September 2011.

Methodology: A total of 42 consecutive admissions from ER and surgical out patient clinic were included regardless of age and sex. The inclusion Criteria was clinical suspicion, investigations, operative findings and positive histopathology. The patients with negative tissue diagnosis were excluded from the study.

Results: Forty two patients with female to male ratio of 9:5 were managed at Jinnah Medical College Hospital, mean age 39 years range 16 years to 62 years. 26 patients admitted via emergency with presentations of acute intestinal obstruction and peritonitis. 16 patients were elective admission with chief complain of chronic abdominal pain and recurrent small bowel obstruction. Hemoglobin % rang from 7.5 -11 gm%. Mean elevation of ESR was 62.5.In 16 patients (38.09%) free air was found under right dome of diaphragm. Ultra sound revealed mass in right lower abdomen In 19 patients. Operative findings were strictures and matting of terminal ileum, ileal perforation and kinking of bowel loops. Mesenteric lymph adenopathy was a common finding.

Conclusion: The investigation plan in abdominal tuberculosis depends on the diverse presentations of the disease, but in all cases histopathology is the final tool in confirming diagnosis.

Keywords: Abdominal T.B. Peritonitis, Intestinal Obstruction, Chronic Abdominal pain

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Introduction:

Tuberculosis is one of the earliest diseases affecting the mankind. Tuberculosis presents both with generalized systemic symptoms and with sign and symptoms according to the site of involvement. The World Health Organization estimates that 1722 million are affected with mycobacterium tuberculosis. Seven to nine million new cases of tuberculosis are diagnosed each year world wide[1]. The largest reservoir of tuberculosis is the Indian sub continent, South East Asia and Oceana[2]. Extra pulmonary forms of tuberculosis constitute approximately one sixth of all cases and the abdomen is the commonest, extra pulmonary site of involvement[3].

Abdominal tuberculosis may present clinically as an acute abdomen, either due to bowel obstruction, perforation or mass in right lower abdomen mimic acute appendicitis or appendicular mass[4]. Most of the patients with chronic abdominal pain recurrent sub-acute obstruction, low grade fever with or without weight loss.

Although patient with abdominal tuberculosis usually present to a surgeon, the role of surgery is normally restricted to making a diagnosis rather than definitive treatment[5]. Even in the areas where the disease is endemic the diagno-

sis is made only in one half of the cases at initial presentation[6].

Material & Methods:

This prospective study was conducted in the Department of Surgery Jinnah Medical college Hospital from April 2008 to September 2011. 42 patients were included in this study after final tissue diagnosis. The inclusion criteria was clinical suspicion, operative finding, positive histopathology (typical caseating granuloma), and response to anti tuberculous therapy. Patients who had laparotomy for suspected abdominal tuberculosis and were negative histopathologically were excluded from the study. The clinical record of all 42 patients was analyzed for presentation of disease, demographic features, mode of diagnosis and treatment offered. The routine investigations included complete blood picture and ESR, RBS,Urea, creatinin and electrolytes. X –Ray chest PA view. Plan X- Ray abdomen in supine and erect posture were carried out in patients with obstruction. U/S was performed in every patient and guided fluid aspiration carried but in patients with positive free fluid. Barium studies was only carried out in patients with chronic abdominal pain and sub acute intestinal obstruction.

Results:

During study period 42 patients were managed at JMCH, of these 27 were female and 15 male with a female to male ratio 9:5 .The age of the patients ranged from 16 years to 62 years with mean age 39 years. 16 patients (38.09 %) presented as elective case with complain of vague chronic abdominal pain or recurrent subacute intestinal obstruction. 26 patients (61.90 %) admitted via emergency out of which 10 (13.8%) with acute intestinal obstruction. 16 patients (38.09 %) with peritonitis. Hb% rang from 7.5-11 gm % with average 9.25 gm%. ESR rang from 75-110 mm in 1st hour, with mean of 62.5. X-Ray chest was found positive for pulmonary tuberculosis in 7 patients (16.66). Plain X-Ray abdomen showed free air under diaphragm in 16(38.095%) patients. 20 patients(47.61%) were positive for multiple air fluid level. In 12 (28.57%) patients, ultra sound revealed mass in right lower abdomen and 19 case(45.23%) free fluid in peritoneal cavity. 35 patients(83.33%) had enlarged mesenteric lymph nodes on ultra sound. Barium meal studies revealed one or more of the features like narrowing of distal ileum and ileocaecal region and matted small bowel.

All 42 patients (100%) underwent exploration of abdomen. The most common operative findings were noted in terminal ileum (56 %), higher strictures were seen in 5% of patients, ileocaecal disease was seen in 16 (38.095%) cases. Remaining 25 patients (59.52%) had peritoneal bands and matted mesenteric lymph nodes causing kinking and obstruction to bowel. In all patients representative tissue was taken for histological evidence of tuberculosis(typical granuloma with caseation).

Discussion:

Tuberculosis continues to be a major health hazard through out the world. Abdominal tuberculosis is the second commonest extra pulmonary form of the disease according to a study carried out by shehzad[7]. The disease can occur at any age but is more common in young adults. The mean age in our study is 39 years which is slight higher than observation of various studies[8]. Majority of Patients in our study presented with acute intestinal obstruction (61.9%). This coincides with many other studies like that of Kapoor[9] and Das and Skukla[10]. Perforation of intestinal lesions may cause peritonitis in 1-10 percent of cases[11]. This observation is quite lower than the values in our study (38.09%). Low Hemoglobin and raised ESR is usually seen in chronic inflammation, and the values differ in various studies. The characteristic ultra sonographic findings of abdominal tuberculosis are low attenuation lymphadenopathy, omental or ileocaecal inflammatory mass, peritoneal thickening and ascites can also be detected frequently[12]. CT scan is better than Ultrasound for showing high density ascites and caseous necrosis of lymph nodes[13]. CT scan was not used in this study because of financial issues. Management problems arise when most of the above investigations are either negative or sophisticated laboratory facili-

ties are not available. The final diagnosis to start anti-tuberculous therapy demand histological confirmation of the disease. In abdominal tuberculosis histological evidence require surgical exploration or laparoscopic biopsy. In this study all patients underwent surgical exploration to relieve symptoms as well as for histological confirmation of the disease. After tissue diagnosis every patient received ATT for 9 to 12 months as most series suggest[14].

Conclusion:

The investigation plan in abdominal tuberculosis depends on the diverse presentations of the disease, but in all cases histopathology is the final tool in confirming diagnosis.

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