

Surgical Study of Abdominal Tuberculosis

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Abstract: 30 cases of abdominal tuberculosis were studied between November 2013 to November 2015 in different surgical units of Government General Hospital, attached to Guntur Medical College, Guntur and affiliated to NTR University of Health Sciences, Vijayawada, AP. The different surgical procedures which were undertaken for established abdominal tuberculosis with failed conservative therapy were analysed. The results were compared with previously published studies, with respect to objective. Most common procedure that was done was Limited Segmental Resection. Post-operative wound infections responded well to anti tubercular treatment with reasonable low mortality.

Keywords : Abdominal Tuberculosis, ATT, Limited segmental resection

I. Introduction

Tuberculosis one of the oldest diseases which forms a major health hazard in the developing countries like India killing nearly 2 million people a year even today, despite the advent of ant tubercular chemotherapeutic drugs and near adequate control measures. Abdominal tuberculosis is a highly endemic entity involving younger age group between 21-40 years. and is most common in areas where overcrowding and under nutrition are predominate. The precise prevalence of tuberculosis of abdomen has not been determined due to lack of survey in random samples of population. TB of gastrointestinal tract is the sixth most frequent form of extra-pulmonary site after lymphatic, genitourinary, bone and joint, miliary and meningeal tuberculosis. In our country intestinal tuberculosis is still one of the single largest cause of intestinal obstruction. In One third of abdominal tuberculosis patients are present with acute abdomen.

Sites of Involvement in Abdominal Tuberculosis includes

1. Gastrointestinal tract
2. Peritoneum, e.g. ascites
3. Lymph nodes
4. Solid organs, e.g. liver, spleen and pancreas.

Primary tuberculosis of Abdomen without antecedent or associated pulmonary tuberculosis is fairly common. The occurrence of abdominal TB is independent of pulmonary disease in most of the patients, with a reported incidence of coexisting disease varying from 5 to 36%. The gastrointestinal tract is involved in 65% to 78% of all abdominal TB patients; The most common site of involvement is the ileocaecal region. The GI tract involvement is commonly associated with peritoneal and lymph node involvement. The three characteristic intestinal lesions produced in tuberculosis include (i) ulcer (ii) hypertrophic lesion and (iii) stricture. A combination of these three morphological forms can also occur such as ulcero-constrictive or ulcero-hypertrophic. Strictures are usually produced as a result of cicatricial healing of ulcerative intestinal lesions. Small bowel or ileocaecal tuberculosis obstruction is due to narrowing of the lumen by hyperplastic caecal tuberculosis, by strictures of the small intestine, which are commonly multiple, or by adhesions. India, around 3 to 20 per cent of all cases of bowel obstruction are due to tuberculosis. Perforation, a serious complication of abdominal TB associated with high mortality & morbidity. The low incidence of tuberculous perforation is due to a reactive fibrosis of the peritoneum. Tuberculosis accounts for 5-8 per cent of all small intestinal perforations in India. Unusual Presentations includes Gastro duodenal involvement, Involvement of appendix, isolated rectal strictures, anal tuberculosis with fistulae. Derangement of Liver function test and liver biopsy changes are observed. Hypersplenism and Splenomegaly are also reported.

II. Review of Literature

Historical records reveal that tuberculosis had been recognized as disease from the earliest time. Hippocrates in the 4th century BC bestowed the name *phthisis*, meaning wasting. William Boyd in 1925 described the hyperplastic group as being a separate type occurring in young women under 40 years of age. In 1928 in his paper on chronic intestinal tuberculosis Mathew Stewart stated that tuberculosis ulceration of the intestine was present in of the cases of pulmonary tuberculosis which came to autopsy. He

offered the hypothesis that the hyperplastic type was caused by bovine strains of mild virulence in a patient with a high resistance to tubercle, which resulted in marked fibrosis in the ileocaecal region.

III. Aims, Objectives And Criteria

Aim of the study: The aim of this study evaluation of the surgical management of abdominal tuberculosis at Government General Hospital, Guntur attached to Guntur Medical College, Guntur and affiliated to NTR University of Health Sciences, Vijayawada, was undertaken from November 2013 to 2015.

Objectives of the study: To study the various surgical treatment modalities in the management of abdominal tuberculosis.

Inclusion Criteria: All patients presented to Out Patient and causality department who were diagnosed as tuberculosis abdomen and Underwent surgery for the same.

Exclusion Criteria: Patients who were diagnosed as tuberculosis abdomen but treated conservatively.

IV. Materials And Methods

In the present study we have retrospectively analysed 30cases of proved abdominal tuberculosis treated surgically in different surgical units of Government General Hospital, Guntur was undertaken from November 2013 to 2015. Thorough history taking and physical examination was done All the routine investigations concerning the disease were done. Each patient was further investigated with sputum for AFB, Peritoneal aspirates & other fluids for biochemical and microbiological examination and contrast studies (Barium meal follow through and Barium enema). Radiological investigations like X-ray, Ultrasound abdomen and CECT Abdomen were performed. The Patients improved with conservative treatment are excluded from this study. Surgical procedures were performed according to the site and extent of the disease, tissue Biopsy was obtained and diagnosis was established with histopathological examination. The different surgical procedures were evaluated.

V. Observations And Results

In the present series of 30 cases, ileocaecal thickening with obstruction was the most common finding, which was present in 14 cases and this was associated with pulled up caecum with narrow ileocaecal valve in 6 cases. Small bowel strictures were found in 5 cases, one stricture was in jejunum, and rest of all was in ileum. Ileal perforations were found in 5cases.Adhesions with obstruction were found in 6 cases. Other common findings were large mesenteric lymph nodes in 14 cases and omental thickening in 3 cases.

The reason for surgery was failed conservative therapy in patients suffering from TB abdomen with Acute on chronic obstruction and perforation, peritonitis. Most common procedure that was done was Limited Segmental Resection, in 8 (26.7%) cases. Right Hemicolectomy was done for extensive lesions involving terminal ileum, Caecum & Ascending colon, in 2 (6.7%) cases. As compared to the present study, in Forrest C et al series 18% of the cases underwent Limited resection, while in M.B. Islam et al series only 10% underwent Limited resection. Right hemicolectomy was performed in 12% of Forrest C et al series and 63.3% of M.B. Islam et al series. Resection and anastomosis was done in 7 cases (23.3%). Of these four were having multiple strictures involving the ileum and three were having perforative peritonitis. As compared to the present study, in Forrest C et al series 31% of the cases underwent resection anastomosis, while in M.B. Islam et al series only 6.6% underwent resection anastomosis.Stricturoplasty was done for 2 (6.7%) of cases; location was ileum, in Forrest C et al series it accounts for 36% of the cases. Adhesionolysis was done for six cases (20%), compared to the present study, in Forrest C et al series 20% of the cases underwent Adhesionolysis, while in M.B. Islam et al series, and only 14.3% underwent Adhesionolysis. Perforation closure was performed in only one case (3.3%) compared to 5% in Forrest C et al series. Ileotransverse Bypass was done in 4 cases (13.3%) compared to 18% in Forrest C et al series and 16.6% cases in M.B. Islam et al series

VI. Figures And Tables

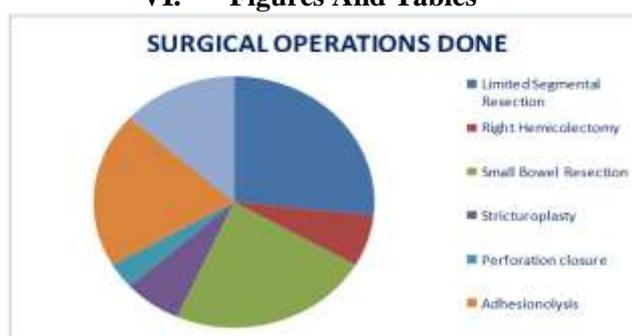


Fig 1. Distribution of Operative Procedure

LIMITED SEGMENTAL RESECTION	8	26.7
RIGHT HEMICOLECTOMY	2	6.7
SMALL BOWEL RESECTION	7	23.3
STRICTUROPLASTY	2	6.7
PERFORATION CLOSURE	1	3.3
ADHESIONOLYSIS	6	20
ILEOTRANSVERSE BYPASS	4	13.3

Table 1. Surgical options Exercised for TB Abdomen (n=30)

Limited(Segmental)Resection	18%		10%		26.7%
Right Hemicolectomy	12%		63.3%		6.7%
Small bowel Resection	31%		6.6%		23.3%
Strictureplasty	36%		3.3%		6.7%
Perforation Closure	5%			Nil	3.3%
Adhesionolysis	20%			Nil	20%
Ileotransverse bypass	18%		16.6%		13.3%

Table 2. Comparison of present study with different studies

VII. Morbidity And Mortality

In the present series the operative morbidity was seen in 5 cases [16.7%], most common complication being wound infection in 4 cases (13.3%). Wound infection was also common in studies of Forrest C et al and reported a morbidity of 36%, while M.B. Islam et al reported a morbidity of 8%.

Mortality in the present series was low, in total 2 patients died (6.7%), all underwent emergency procedures, and one deaths were reported in elective cases. Only M.B. Islam et al reported mortality lower than the present study, no cases died in their study. In Forrest C et al series, it was 3% in elective surgery and 18% in emergency. All patients were Followed with six months of anti tubercular treatment gave excellent results in 90% of the patients after surgery.

VIII. Conclusion

A study on surgical management of abdominal tuberculosis was done on 30 cases that were not responding to conservative treatment. The limited segmental resections were undertaken in 26.7% of cases and small bowel resections accounts for 23.3% of cases. The limited segmental resection and small bowel resections for obstructive lesions are still hold good for surgical management of abdominal tuberculosis and are the main stay of treatment in view of comparative results.

Wound infection common in 16.7% of cases and most of them responded well to anti tubercular treatment So all post-operative patients should be started on 6 months of ATT. Mortality is reasonably low accounting for only 6.2% cases and all cases were done as emergency procedure.

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