A Study on Surgical Management of Intestinal Tuberculosis.

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ABSTRACT

Background: Abdominal tuberculosis is a diagnostic and therapeutic challenge in resource limited countries. The vague clinical presentation is a barrier to early diagnosis. Aim: To study the surgical treatment of tuberculosis affecting various portions of small and large intestines, its complications and follow up with antituberculosis (chemotherapy) treatment. Methods: This is a descriptive study of abdominal tuberculosis cases, which were operated in the Department of Surgery. Cases were analyzed in terms of demography, clinical features, investigations, operative treatment, and outcome. Results: In the present study 12 cases (48%) presented with hyperplastic ileocaecal lesion with or without ileal stricture. 8 cases (42%) presented with strictures of ileum and 2 cases with strictures of jejunum. 8 patients (32%) underwent limited ileocaecal resection of mass and ileoascending anastomosis, which was followed by right hemicolectomy in 6 cases (24%). For 5 cases (20%) resection and anastomosis was done for jejunal and ilea strictures. 15 cases has completed antitubercular therapy and were symptom free. There we no mortality in the present study. Conclusion: Early diagnosis is the key factor in avoiding systemic and local complications of intestinal tuberculosis. In emergency cases, prompt surgical exploration and vigilant care is met with good recovery.

Keywords: Abdominal tuberculosis, Intestinal stricture, Bowel perforation.

INTRODUCTION

Tuberculosis is a disease of great antiquity, and for a long time, it had maintained its evil reputation of being one of the greatest killer diseases of the humanity. There has been an increase in the number of cases globally from mid-1980’s largely attributable to HIV infection, migration and social deprivation. Intestinal tuberculosis is an important clinical entity and is found worldwide, although prevalence rates are still highest in developing countries.[1-3] Tuberculosis of the ileocaecal region ranks the first incidence of intestinal tuberculosis. Some patients will require immediate surgical intervention, whereas others will improve with conservative treatment. Surgical management of intestinal tuberculosis has changed considerably from bypass operations, hemicolecotomy to conservative resection and strictureplasty.[4] The aim of surgery in case of intestinal tuberculosis is to overcome deleterious effects of the disease like tissue disorganization, obstruction, and perforation. The incidence, varying modes of presentation different modalities of diagnosis, treatment, and prognosis in our setup have to be studied to identify factors which can help in better management of these cases thus helping to improve the prognosis.[5-7]

Aims

To study the surgical treatment of tuberculosis affecting various portions of small and large intestines, its complications and follow up with antituberculosis (chemotherapy) treatment.

MATERIALS AND METHODS

This study includes selection of patients with intestinal tuberculosis on a prospective basis. The patients were selected after they were diagnosed as having intestinal tuberculosis on the basis of a detailed history, thorough physical examination and both routine and supportive investigations like X-ray abdomen, Barium studies and ultra sound abdomen. The study also required various surgical interventions. Those patients wherein intestinal tuberculosis was confirmed by histopathological examinations are included in this study. Those patients in whom histopathological examination report to be otherwise were excluded from this study.

All the patients were put on antituberculosis therapy, either for a period of 6 months or 9 months and they were asked to present themselves for follow up at regular intervals. Most of the patients had uneventful recovery but some cases had immediate post operative complications like wound infection, wound dehiscence and fecal fistula.

RESULTS

In our study, the age of the patients ranged between 18 and 65 years, the maximum number of cases of intestinal tuberculosis was found to be in the age range of 20-40 years. The男女比例 were approximately equal. The commonest site of involvement was the ileocaecal region, followed by the ileum and jejunum. The predominant clinical features were abdominal pain, fever, weight loss, and diarrhea. The abdominal pain was often colicky in nature and associated with rigidity and rebound tenderness. The majority of the patients had a history of fever and weight loss. The commonest operative procedure was resection and anastomosis, followed by ileocaecal resection and ileoascending anastomosis. The operative complications were wound dehiscence and fecal fistula. The patients were put on antituberculosis therapy, either for a period of 6 months or 9 months and they were asked to present themselves for follow up at regular intervals. Most of the patients had uneventful recovery but some cases had immediate post operative complications like wound infection, wound dehiscence and fecal fistula.

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group between 31 and 40 years, which was found to be 9 patients i.e. (36%), 41-50 years age group accounted for 8 patients i.e. 32%. 21-30 years age group accounted for 4 patients (16%), while 51 and above accounted for 2 patients (8%) and 11-20 years age group accounted for 2 patients (8%). There were 18 males and 7 females in the present study i.e. 72% and 28% respectively. The commonest symptoms of pain abdomen was seen in all 25 patients (100%) in the present study. 21 patients in the present study had loss of weight (84%). The bowel disturbances usually constipation alternating with diarrhoea was a feature in patients (84%) low grade fever in the evening with malaise was seen in 15 patients (60%). Vomiting was a common accompanying feature in 10 patients (60%). Attacks of pain abdomen was often associated with a mass formation in right iliac fossa in 9 patients (36%). Eighteen patients had abdominal tenderness, (72%) usually generalized or confined to right iliac fossa. In 14 patients (56%) a definite mass was palpable. Abdominal rigidity was found in only 1 patient (4%).

In the present study 9 patients (36%) exhibited evidence of pulmonary tuberculosis, on chest X-ray while 16 cases (64%) did not exhibit evidence of pulmonary tuberculosis on chest X-ray. Probably the intestines were affected primarily. This indicates that intestinal tuberculosis is not always secondary to pulmonary tuberculosis.

<table>
<thead>
<tr>
<th>Site and type of lesion</th>
<th>No. of cases</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stricture of jejunum</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Stricture of ileum</td>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td>Ileal perforation with stricture</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Hyperplastic ileocaecal lesion with or without ileal stricture</td>
<td>12</td>
<td>48</td>
</tr>
<tr>
<td>Hyperplastic ileocaecal lesion with colonic stricture</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Colonic stricture</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

In the present study 12 cases (48%) presented with hyperplastic ileocaecal lesion with or without ileal stricture. 8 cases (42%) presented with strictures of ileum and 2 cases with strictures of jejunum. 2 cases (8%) presented hyperplastic ileocaecal lesion with colonic stricture. 1 case (4%) presented with ileal perforation with stricture and peritonitis. In our present series, around 8 patients (32%) underwent limited ileocaecal resection of mass and ileoascending anastomosis, which was followed by right hemicolecotomy in 6 cases (24%). For 5 cases (20%) resection and anastomosis was done for jejunal and ilea strictures. Strictureplasty with or without adhesiolysis was carried out in 5 patients (20%). In the present series, only 1 patient underwent double layer closure of ileal perforation along with stricture plasty of ileum.

<table>
<thead>
<tr>
<th>Table 3: Various surgical modes of treatment</th>
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<tbody>
<tr>
<td>Operation</td>
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<tr>
<td>Resection anastomosis of jejunal and ileal strictures</td>
</tr>
<tr>
<td>Right Hemicolectomy</td>
</tr>
<tr>
<td>Ileocaecal resection and ileoascending anastomosis</td>
</tr>
<tr>
<td>Strictureplasty with or without adhesiolysis</td>
</tr>
</tbody>
</table>
| Other procedures (perforation closure, bypass etc) | 1 | 4%

In the present study, post-operative complications like wound sepsis was recorded in 2 patients (8%) while faecal fistulae was seen in 1 patient (4%) and wound dehiscence in 1 patient (4%).

**Follow Up.**
Cases were followed up between six months and four years. All patients were put on standard antituberculous therapy.
In the present study 15 cases has completed anti-tubercular therapy and were symptom free. 8 cases are still on anti-tubercular therapy and were symptoms free. 3 cases who were put on anti-tubercular therapy did not turn up for follow up. There we no mortality in the present study.

**DISCUSSION**
In the present study, most patients of intestinal tuberculosis presented between 31-40 years and 41-50 years age group, which were 36% and 32% respectively. According to J.D. Wig et al series, majority of patients were in 21-30 years and 31-40 years which were 50.7% and 20.5% respectively. According to Ramesh C. Bharti et al (1996) series majority of patients were in 21-30 years and 11-20 years which were 38.6% and 21.2% respectively. In the present study majority of the patients were male, which was found to be 72% while only 28% of patients were female. As compared with other studies J.D. Wig et al series showed 67.2% females and 32.87% males and Pritam Das and H.S. Shukla 1976 series showed 72% females and 28% males. A female predominance had been observed in other series as against our study which were predominantly males. This disparity can be explained as ours was a random study. In the present...
study we found that 100% of patients had come to the hospital with complaints of pain abdomen. This study results were similar to Pritam Das and H.S. Shukla (1976) series, where 94% of patients presented with complaints of pain abdomen.[10] The findings of the present study show that 72 percent of patients had abdominal tenderness. This result is similar when compared to other series such as in the Atm. Prakash et al (1978) which showed 56 percent and in Pritam Das and H.S. Shukla (1976) which showed 65.9%.[10,11]

In the present study 32% of patients underwent ileocaecal resection and ileoascending anastomosis while 24% of patients underwent right hemicolectomy was performed in 50.6% of patients. More number of limited resection as against hemicolectomy were done in the present study indicating that a formal right hemicolectomy is not always necessary.

In the present series, 8% of the patients had wound sepsis during post-operative period. This observation is similar to another series conducted by Ramesh C. Bharti et al (1996), which was found to be 6.8%. [11]

**CONCLUSION**

This study supports the fact that anti-tuberculous therapy is still the treatment of choice in intestinal tuberculosis and surgery is only indicated in various complications of intestinal tuberculosis. Also there has been a gradual decline in performing radical surgeries while there has been an increase in trend in performing conservative surgeries.

**REFERENCES**


Source of Support: Nil, Conflict of Interest: None declared