INTESTINAL TUBERCULOSIS SURGICAL ASPECTS

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SUMMARY

One hundred cases of intestinal tuberculosis admitted to the surgical units of Hayat Shaheed Teaching Hospital were studied. 83 cases were admitted as emergency, and of these, all except 2 had acute intestinal obstruction. 17 elective admissions had symptomatology of sub-acute intestinal obstruction. Male to female ratio was 1:2 and mean age was 26 and 21 respectively. Multiple strictures involving the ileum was the commonest finding and resection with or without stricturoplasty was the preferred procedure.

INTRODUCTION

Intestinal tuberculosis, a form of abdominal tuberculosis, is now very rarely encountered in the western countries. However it is still very common in the developing countries including Pakistan. Intestinal tuberculosis either occurs as a primary form due to the ingestion of milk contaminated by bovine strain of Mycobacterium Tuberculosis or secondary to the pulmonary tuberculosis. The diagnosis of intestinal tuberculosis in early stages remains very difficult. It is usually diagnosed after the development of complications like obstruction or perforation. The advent of effective antituberculous chemotherapy has revolutionised the treatment of tuberculous patients, decreasing the morbidity and mortality. The surgical treatment is usually reserved for complications, or failure of medical therapy. The purpose of this study was to evaluate one hundred patients of intestinal tuberculosis admitted to surgical units of Hayat Shaheed Teaching Hospital, Peshawar.

MATERIAL AND METHODS

One hundred cases of intestinal tuberculosis admitted to surgical units of Hayat Shaheed Teaching Hospital were studied retrospectively. Ascitic forms were excluded. The diagnostic criteria were laparotomy findings and histological confirmation. The data was collected from the record files. Both emergency and elective admissions were included. The emergency patients had only brief preop work up including routine haematological, biochemical and chest X-ray. The patients admitted electively with a suspicion of intestinal tuberculosis, had in addition to the routine investigations, an ESR and upper gastrointestinal barium studies done preoperatively. Mode of admission, the symptomatology, site of lesion and preferred procedures were studied.

RESULTS

In the hundred cases studied, the male to female ratio was 1:2 and their mean age was 26 and 21 respectively. (Table 1) Females outnumbered males in all the age groups. 83% presenting as emergency and of these majority presenting with acute intestinal obstruction, only 2 cases presenting as peritonitis (Table II). In the elective group, the main presented feature was abdominal pain, distension and weight loss.
TABLE – I
AGE AND SEX DISTRIBUTION OF 100 CASES

<table>
<thead>
<tr>
<th>AGE</th>
<th>MALE</th>
<th>FEMALE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 20</td>
<td>13</td>
<td>18</td>
<td>31</td>
</tr>
<tr>
<td>21-40</td>
<td>15</td>
<td>38</td>
<td>53</td>
</tr>
<tr>
<td>41-60</td>
<td>5</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>&gt; 60</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>34</td>
<td>66</td>
<td>100</td>
</tr>
</tbody>
</table>

MEAN AGE: 26(13-62) 21(9-64)
MALE/FEMALE RATIO: 1:2

A palpable mass was present in 7 patients (Table II). It is interesting to note that there were 25 suspected cases of intestinal tuberculosis who underwent laparotomy, but the diagnosis was confirmed in only 17 cases, the remaining having some other pathology. At laparotomy, the most finding was, multiple strictures involving the terminal ileum, whereas single ileal stricture was the least common. (Table III). The operative procedures done for various types of lesions are shown in Table IV and Table V. Biopsy only was done in 2 cases due to extensive disease or adhesions. The preferred procedure was stricturoplasty with or without resection, consisting of limited right hemicolecction (25 cases) or segmental resection for multiple ileal strictures (9 cases). Bypass was done in 22 cases, entero-enterostomy (7 cases) or ileo-transverse anastomosis (15 cases).

DISCUSSION

Intestinal tuberculosis is a form of abdominal tuberculosis, the other being

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TABLE – II
PRESENTING FEATURE

<table>
<thead>
<tr>
<th></th>
<th>MALE</th>
<th>FEMALE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC. INT. OBS.</td>
<td>30</td>
<td>51</td>
<td>81</td>
</tr>
<tr>
<td>Peritonitis</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>ELECTIVE ADMISSIONS n=17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fever</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Wt loss</td>
<td>2</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Abd pain</td>
<td>4</td>
<td>13</td>
<td>17</td>
</tr>
<tr>
<td>Vomiting</td>
<td>–</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Distension</td>
<td>3</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Infertility</td>
<td>–</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Visible peristalsis</td>
<td>–</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Palpable mass RIF</td>
<td>1</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Chest symptoms</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

30
tuberculous peritonitis. It can occur primarily as a result of ingestion of Bovine strain of Myco Tub (infected milk) or can be secondary to pulmonary tuberculosis. Due to the pasteurisation of milk, herd testing, better living conditions and effective antituberculous chemotherapy the incidence of tuberculosis has decreased in western countries.\textsuperscript{15} Now less then 1% of patients with pulmonary tuberculosis develop intestinal tuberculosis and less then 50% of patients with intestinal lesions have coexistent pulmonary tuberculosis.\textsuperscript{2} It involves either ileum or ileocaecal region or both and can be hypertrophic, ulcerative, fibrotic or ulcerofibrotic. Intestinal tuberculosis remains a major health problem in developing countries including Pakistan. The diagnosis in early stages remains very difficult due to vague and non-specific symptoms, diagnosis is often made on operation table. Patients remain undiagnosed for prolonged periods, receiving symptomatic treatment, complications like acute intestinal obstruction is common. That the females out number males as in our series is supported by the literature.\textsuperscript{4} In present study the ileocaecal region, alone or in combination with coexistent ileal lesions, was involved in only 42 cases which is in contradiction to other studies with figures as high as 85%.\textsuperscript{26} Surgery should be reserved for the complications only and the diagnosis in other suspected cases being supported by antitubercular drug trial. Out of the 25 suspected cases undergoing exploration, 17 were confirmed. The surgical procedure depends upon the site, type, and extent of lesion. Previously patients had palliative bypass, however the incidence of recurrent obstruction, blind loop syndrome, fistula and cold abscess was high.\textsuperscript{78} Effective chemotherapy, antibiotic cover and the change in surgical policy has lowered the incidence of these complications.\textsuperscript{9,12} More stress is being now laid upon resection procedures. There is no restriction on the number of stricturoplasties,\textsuperscript{13} in some cases more then 33 have been performed.\textsuperscript{14,15} If the multiple

\begin{table}
\centering
\caption{SITE OF LESION}
\begin{tabular}{llll}
\hline
SITE & MALE & FEMALE & TOTAL \\
\hline
Single stricture in ileum & 5 & 7 & 12 \\
Multiple stricture in ileum & 15 & 31 & 46 \\
Ileocaecal tuberculosis & 11 & 18 & 29 \\
Combined ileocaecal and ileal & 3 & 10 & 13 \\
\hline
\end{tabular}
\end{table}

\begin{table}
\centering
\caption{PROCEDURES DONE IN STRICTURES OF ILEUM}
\begin{tabular}{llll}
\hline
LESION & STRICTUROPLASTY & RESECTION & BYPASS & BIOPSY \\
& (with or without strictureplasty) & & & \\
\hline
SINGLE STRicture & 12 & - & - & - \\
MULTIPLE & 30 & 9 & 7 & - \\
\hline
\end{tabular}
\end{table}
TABLE V
PROCEDURES IN ILEOCAECAL AND COMBINED ILEAL AND ILEOCAECAL LESIONS

\[ n = 42 \]

<table>
<thead>
<tr>
<th>LESION</th>
<th>RESECTION</th>
<th>BYPASS</th>
<th>BIOPSY ONLY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(with or without</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>stricturoplasty)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ileocaecal</td>
<td>20</td>
<td>9</td>
<td>–</td>
</tr>
<tr>
<td>Combined</td>
<td>5</td>
<td>6</td>
<td>2</td>
</tr>
</tbody>
</table>

strictures are close together, then limited resection and end to end anastomosis is recommended. For ileocaecal tuberculosis, palliative ileotransverse bypass was the main treatment in the past.\(^8\) Now right hemicolectomy is the preferred procedure.\(^1\,\,^2\,\,^12\,\,^16\,\,^17\) By pass is advisable only in very advanced lesions.\(^2\) Post operatively the antitubercular treatment is recommended for one year using three drugs regime or six months after cessation of symptoms.

CONCLUSION

Tuberculosis although very much decreased in the western world is still endemic in our country. It remains an important source of significant morbidity and economic burden on the society. The intestinal tuberculosis presents a diagnostic problem in the early stage, later presenting usually with complications. High degree of suspicion, proper evaluation and therapeutic trial in suspected cases will help to decrease the incidence of complications in intestinal tuberculosis. Moreover legislative measures need to be strengthened to implement the tuberculosis control programme.

REFERENCES


