ACUTE ABDOMEN- PRESENTATION OF INTESTINAL TUBERCULOSIS

D. Loganathan¹, K. V. Saravanan², Surya Jayaraj³

¹Associate Professor, Department of General Surgery, Government Vellore Medical College, Tamilnadu, India.

²Assistant Professor, Department of General Surgery, Government Vellore Medical College, Tamilnadu, India.

³Junior Resident, Department of General Surgery, Government Vellore Medical College, Tamilnadu, India.

ABSTRACT**BACKGROUND**

Intestinal tuberculosis is difficult to diagnose as it mimics many other diagnoses. It is an important cause of morbidity in India. This study includes the cases which were diagnosed to have intestinal tuberculosis after presenting as an acute abdomen. Study also determines the various presentations of intestinal tuberculosis and the intraoperative findings. Intestinal tuberculosis presenting as an acute abdomen is a challenge to the surgeon. Depending upon the presentation and the type and site of involvement seen intra-operatively, the therapy is decided and followed by a course of antituberculous medication.

MATERIALS AND METHODS

This prospective study, conducted in Government Vellore Medical College Hospital, from January 2017 to December 2018. Patients who were diagnosed to have intestinal TB when they presented to our institution with an acute abdomen were included in the study. Study included 280 patients who presented with acute abdomen. Intraoperative findings, tissue culture, node biopsy were taken into considerations. As per the intraoperative findings, therapy was decided, followed by antitubercular treatment.

RESULTS

In our study, about 30 cases were diagnosed to have intestinal tuberculosis when they presented with acute abdomen. Male predominance was noted among the cases. Most affected age group was 25- 40 years. 10 cases had a family history of tuberculosis and 4 cases had a previous history of tuberculosis. About 4 cases were treated conservatively followed by antitubercular treatment. The commonest presentation was intestinal obstruction (33%) with intraoperative finding as stricture as commonest one (23%). The most common region involved was ileocaecal region. About 26 cases needed surgical intervention. According to the intraoperative findings, 31% cases underwent segmental resection and anastomosis. All cases were given antitubercular treatment.

CONCLUSION

The diagnosis of intestinal tuberculosis is difficult as it may mimic many other diseases. Timely intervention in case of emergency followed by course of antitubercular medication can give a better cure to the patient.

KEY WORDS

Acute Abdomen, Intestinal Tuberculosis

HOW TO CITE THIS ARTICLE: Loganathan D, Saravanan KV, Jayaraj S. Acute abdomen presentation of intestinal tuberculosis. J. Evolution Med. Dent. Sci. 2019;8(11):807-810, DOI: 10.14260/jemds/2019/178

BACKGROUND

Among the extra-pulmonary tuberculosis, abdominal tuberculosis is considered to be the 6th most common type. Mostly the cases of abdominal tuberculosis are seen in developing countries.

There are different types of abdominal tuberculosis like tuberculosis involving the small and large intestine, peritoneum, omentum, oesophagus, mesentery, retroperitoneum, gastric, liver, spleen and other organs. Commonest among these is the intestinal tuberculosis among which the ileocaecal junction is the most frequently affected. Rarest among the abdominal tuberculosis is the gastric tuberculosis.

Koenig's syndrome as the intestinal tuberculosis is named as, spreads by ingestion of food contaminated with tubercle bacilli causing primary intestinal tuberculosis, ingestion of sputum containing the tubercle bacilli which is from the primary focus which can lead to secondary intestinal tuberculosis. There are other methods of spread of intestinal tuberculosis like hematogenous spread from tuberculosis of lungs,

From tuberculous cervical lymphadenitis through lymphatics and in case of females retrograde spread to the peritoneum from fallopian tubes.

The reason for the ileocaecal site being the most common site is because of the Peyer's patches and the stasis of luminal contents favoured by the ileocaecal valve.

Types of intestinal tuberculosis are ulcerative which accounts to 60%, were there will be transverse ulcers mostly seen in malnourished old age people. Bowel adhesions and strictures are common in this type.

There is another entity of intestinal tuberculosis presenting as hyperplastic type which accounts to about 10% seen mostly in young nourished individuals. It may present as mass in the right iliac fossa region. 30% may present with ulcerohyperplastic.

'Financial or Other Competing Interest': None.

Submission 06-01-2019, Peer Review 01-03-2019,

Acceptance 08-03-2019, Published 18-03-2019.

Corresponding Author:

Dr. K. V. Saravanan,

No. 3, Tarun Balaji Villa,

Kumaraswamy 2nd Street,

Thorappadi, Vellore-632011,

Tamilnadu, India.

E-mail: drkvsaravanan@gmail.com

DOI: 10.14260/jemds/2019/178

Intestinal tuberculosis presents mostly with abdominal pain in about 90% of case. Mostly in between 25-50 years of age and it can involve both genders and may present with anaemia, loss of weight and appetite, diarrhoea, fever. Ileocaecal tuberculosis also may present as a mass in the right iliac fossa region in about 35% of cases which may mimic like carcinoma caecum. 20% of ileocaecal TB may present with acute intestinal obstruction.

Intestinal tuberculosis presenting as an acute abdomen is a challenge to the surgeon. Depending upon the presentation and the type and site of involvement seen intra-operatively, the management is proceeded and followed by the course of antituberculous medication.

Objective of The Study

To estimate the proportion of patients presented with acute abdomen who had an outcome of intestinal tuberculosis.

MATERIALS AND METHODS

Study Design

Descriptive study.

Study Population

All patients presented with acute abdomen for a period of two years.

Inclusion Criteria

- Presenting to casualty with acute abdomen.
- All age group.

Exclusion Criteria

Abdominal Trauma.

Study Period

From January 2017 to December 2018.

Sample Size

280 patients.

Methodology

This prospective study conducted in Government Vellore medical college hospital from the period of January 2017 to December 2018 based on those patients who were diagnosed to have intestinal TB after they presented to our institution with an acute abdomen. Study included 280 patients who presented with acute abdomen.

Intraoperative findings and tissue culture, node biopsy were taken into considerations. As per the intraoperative findings the management was proceeded

The data's were entered and analysed in SPSS version 16. The percentage and proportions were calculated.

Statistics

All consecutive cases of intestinal tuberculosis at Government Vellore Medical College Hospital from January 2017 to December 2018 from an electronic database and manually scrutinized the case notes of the patients in SPSS version 16. The parameters such as the demographic of the patient, the

presenting symptoms of acute abdomen, family history and past history of tuberculosis, intraoperative findings and treatment modalities were noted. Among 280 patients, 30 were diagnosed to have intestinal tuberculosis.

RESULTS

Out of 280 cases which presented as acute abdomen, 142 were males (50%) and 138 (49%) were females. 30 cases (10%) were diagnosed to have intestinal tuberculosis. Among the 30 patients 18 were males (60%) and 12 (40%) were females. Mainly in the age group of 25 to 40 years about 22 patients (73%). Only 4 patients had a history of pulmonary tuberculosis (13%). 10 patients had a family history of tuberculosis (33%).

The most common presentation was acute intestinal obstruction 10 (33%), abdominal distension with ascites 5 (17%) cases, abdominal pain with lump 5 (17%), hollow viscus perforation 6 (20%) and subacute intestinal obstruction 4 (13%). Associated low grade fever, vomiting and constipation.

26 (86%) cases were taken up for emergency laparotomy and 4 cases were conservatively managed (13.3%). X-ray abdomen erect showed most of the cases -multiple air fluid levels and about 6 cases - air under the diaphragm

Operative findings were multiple intestinal stricture 6 (23%) cases, mass with ascites 5 (19%), multiple mesenteric nodes 4 (16%), intestinal perforation with tubercle 6 (23%) and 5 (19%) cases abdominal cocoon.

Mostly involved site were ileocaecal region in about 12 cases, terminal ileum involved in 6 cases, 5 cases jejunum and about 3 cases found to be involving colon.

Procedures carried out were segmental resection anastomosis in about 8 (31%) cases, repair of perforation 6 cases (23%) temporary ileostomy (19%) in 5 cases, adhesiolysis 7 (27%) in cases, node biopsy taken in and tissue biopsy taken for all suspected cases.

4 cases were initially resuscitated, and Ryle's tube aspiration was done, and the symptoms were gradually decreasing and was managed as subacute obstruction.

All cases were proceeded with antituberculous treatment.

Sl. No.	Gender	Acute Abdomen	Percentage
1	Male	142	50%
2	Female	138	49%

Table 1. Showing Gender Distribution of Total Study Participants (n = 280)

Clinical Diagnosis	Frequency	Total	Percentage
Hollow Viscus Perforation	62	280	23%
Acute Appendicitis	98	280	35%
small Bowel Obstruction	58	280	21%
large Bowel Obstruction	62	280	23%

Table 2. Showing Distribution of Study Participants Based on Clinical Diagnosis

Total Case of Acute Abdomen	Intestinal Tuberculosis	Percentage
280	30	10%

Table 3. Showing the Proportion of Intestinal Tuberculosis Among the Total Number of Cases

Cases of Intestinal Tuberculosis	Operated	Conservatively Managed	%
30	26	4	13%

Table 4. Showing Proportion of Patients Managed Conservatively

Gender	Frequency	Percentage
Male	18	60%
Female	12	40%
Total	30	100

Table 5. Showing Gender Distribution of Cases of Intestinal Tuberculosis

Age	Intestinal Tuberculosis	Percentage
<25	3	10
25 - 40	22	73
> 40	5	17

Table 6. Showing Age Wise Distribution of Cases of Intestinal Tuberculosis

Sl. No.	Past History	Family History
1	4	10

Table 7. Shows Distribution Based on Past History and Family History

Clinical Presentation	Frequency	Percentage
Intestinal Obstruction	10	33%
Ascites	5	17%
Abdominal Lump	5	17%
Subacute Obstruction	4	13%
Hollow Viscus Perforation	6	20%

Table 8. Distribution Based on Clinical Presentation

Intraoperative Findings	Frequency	Percentage
Multiple Intestinal Stricture	6	23%
Mass with Ascites	5	19%
Multiple Mesenteric Nodes	4	16%
Intestinal Perforation with Tubercle	6	23%
Abdominal Cocoon	5	19%

Table 9. Showing Distribution Based on Intraoperative Findings

Procedure Done	Frequency	Percentage
Segmental Resection and Anastomosis	8	31%
Perforation Repair	6	23%
Temporary Ileostomy	5	19%
Adhesiolysis	7	27%

Table 9. Showing Distribution Based on the Procedure Done

DISCUSSION

In our study, male predominance was noted among the diagnosed intestinal tuberculosis cases. Study showed the age group mostly affected was between 25 – 40 years. About 10 patients among the 30 cases had a family history of tuberculosis and 4 had a past history of tuberculosis.

About 10 cases presented as intestinal obstruction (33%), 5 cases with ascites (17%), 5 with abdominal lump (17%), about 6 cases with hollow viscus perforation (20%) and 4 cases subacute obstruction (13%).

4 cases after initial resuscitation, Ryle's tube aspiration and serial x ray taken showed reduced air fluid level with decreased abdominal distension and was managed conservatively.

Most of the cases showed multiple air fluid level in x-ray abdomen erect and about 6 cases had air under diaphragm.

Intraoperative findings were multiple intestinal stricture in about 6 cases (23%), mass with ascites in 5 cases (19%), multiple mesenteric nodes 4 (16%), intestinal perforation with tubercles 6 (23%) and abdominal cocoon in about 5 cases (19%). Most frequently seen ileocaecal junction being involved followed by terminal ileum, jejunum and colon.

The symptoms and signs have been reported like that of the previous studies related to it.^(1,2,3)

Depending on the intraoperative findings, proceeded with the procedures. In about 8 cases segmental resection and anastomosis was done 8 (31%), Perforation repair was done in 6 cases (23%), in about 5 cases (19%) temporary ileostomy was done and about 7 cases adhesiolysis was done (27%). In all suspected cases nodal biopsy and tissue biopsy was taken. The biopsy showed features of tuberculosis. All cases were started with antitubercular treatment and followed up in OPD after discharge and reversal of the ileostomy cases were done after about 3 months of antitubercular treatment.

Tuberculosis can occur in any part of the gastrointestinal tract.⁽⁴⁾ Most likely affecting the terminal ileum, proximal colon and peritoneum. Ulcerative type develops secondary to the pulmonary tuberculosis and arises as a result of

swallowing tubercle bacilli. Multiple ulcers, lying transversely, develop in the terminal ileum and overlying serosa is thickened, reddened and covered in tubercles.

Patient may present with diarrhoea, weight loss, subacute obstruction, perforation and fistula formation can occur.

Hyperplastic tuberculosis is caused by the ingestion of Mycobacterium tuberculosis by patients with a high resistance to the organism. Infection usually occurs at the ileocaecal junction. Multiple ileal lesions may also be seen.⁽⁴⁾

The infection establishes itself in lymphoid follicles and result in chronic inflammation causing thickening of the intestinal wall and narrowing of the lumen. There will be early involvement of the regional lymph nodes.⁽⁴⁾

Even though emergency interventions can overcome the temporary crisis of abdominal tuberculosis, the permanent cure can only be achieved by a full course of antitubercular medication.^(1,2,3,5,6)

CONCLUSION

Intestinal tuberculosis constitutes about 10 % of all acute abdomen. It is difficult to diagnose and may mimic other acute abdomen presentations. The diagnosis of intestinal tuberculosis may be delayed till it presents as an emergency. In our study, about 30 cases were diagnosed to have intestinal tuberculosis who presented with acute abdomen. Male predominance was noted among the cases. Most involved age group was 25-40 years. 10 cases had a family history of tuberculosis and 4 cases had a previous history of tuberculosis. About 4 cases were treated conservatively followed by antitubercular treatment. The commonest presentation was intestinal obstruction (33%) and stricture to be the commonest intra-operative finding (23%). The most common region involved was ileocaecal region. About 26 cases needed surgical intervention. According to the intraoperative findings, 31% cases underwent segmental resection and anastomosis. All cases were given antitubercular treatment. Timely intervention of acute presentations followed by antitubercular treatment can give a better cure for such patients.

REFERENCES

- [1] Sircar S, Taneja VA, Kansra U. Epidemiology and clinical presentation of abdominal tuberculosis – a retrospective study. J Indian Medical Association 1996;94(9):342-4.
- [2] Shaikh MS, Dholia KR, Jalbani MA, et al. Prevalence of intestinal tuberculosis in cases of acute abdomen. Pakistan Journal of Surgery 2007;23(1):52-6.
- [3] Kumar R, Saddique M, Iqbal P, et al. Abdominal tuberculosis – clinical presentation and outcome. Pakistan Journal of Surgery 2007;23(4):242-4.
- [4] Williams NS, O'Connell RP, McCaskie AW. Bailey and Love's Short practice of surgery. 27th edn. CRC Press 2018: p. 1248.
- [5] Kumar S, Pandey HI, Saggu P. Abdominal tuberculosis. In: Taylor I, Johnson CD, eds. Recent advances in surgery. 28th edn. London: Royal Society of Medicine Press 2008: p. 47-58.
- [6] Kapoor VK. Modern management of abdominal tuberculosis. In: Taylor I, Johnson CD, eds. Recent advances of surgery. Vol. 35. JayPee Brothers Medical Publisher (P) Ltd., 2013: p. 156-69..