Original article

A study of intestinal tuberculosis in a tertiary care teaching hospital.

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Abstract:

Background: Abdominal tuberculosis remains widely prevalent in developing countries such as India. Tuberculosis can affect any part of the gastrointestinal tract from the mouth to the anus. Also, it is being increasingly encountered in industrialized nations due to the AIDS pandemic and transglobal migration. Present study aims to observe demographic characterstics, clinical presentations and different gastrointestinal sites of involvement of intestinaltuberculosis.

Materials & Methods: 40 patients suspected of intestinal tuberculosis and then proven by histopathology, done after surgical intervention, were included in the study.

Results & Conclusions: In present study, Ileum was most commonly affected site in Intestinal TB followed by Ileo-Caecal junction, its surgical removal was necessary to treat the condition. Age group most commonly affected were of 11 to 30 years. Female to male ratio was 1.86:1. Pain Abdomen was presenting complaint of all patients. Followed by fever, Vomiting and Weight loss respectively.

Key Words: Intestinal tuberculosis, abdominal pain, fever, anorexia, night sweats, Ileum, Colon.

Introduction:

Tuberculosis, a disease known to mankind from ancient times, could be taken under controlonly after the advent of antimicrobial therapy in 1946.However, it has started to resurge worldwide in the last 10years, due to primary resistance to firstlineantitubercular drugs and HIV epidemic. One-third of the world population is under the riskof acquiring TB according to WHO and more than 30 milliondeaths had been expected due to TB in the nineties especiallyin Africa and Asia.[1] Not surprisingly, there is also an increasein the percentage of patients with atypical presentations andatypical extra-pulmonary forms of TB. Extra-pulmonary organinvolvement of TB is estimated as 10-15 % of patients notinfected with HIV whereas the frequency is about 50-70 % in patients infected with HIV.[2]

Abdominal tuberculosis remains widely prevalent indeveloping countries such as India. Tuberculosis can affect any part of the gastrointestinal tract from the mouth to the anus. Also, it is beingincreasingly encountered in industrialized nations dueto the AIDS pandemic and transglobal migration.[3,4]

Abdominal involvement is not rare, however, and complicates pulmonary tuberculosis in 6%-38% of patients.[5] Possible mechanisms in the development of abdominal involvement of tuberculosis include ingestion of infected material such as sputum or milk, or hematogenous dissemination to the abdominal viscera and lymphatic system from a

distant focus, usually in the lung.[6,7]

Present study aims to observe demographic characterstics, clinical presentations and different gastrointestinal sites of involvement of intestinaltuberculosis.

Materials & Methods: The study comprised of total 40 patients of intestinal tuberculosis, carried out at tertiary care hospital, Veer Chandra Singh Garhwali Government Institute of Medical Science and Research, Srinagar, PauriGarhwal, Uttarakhand. Patients suspected of intestinal tuberculosis and then proven by histopathology, done after surgical intervention, were included in the study. Informed consent of the patients was taken and approval from the institutional ethical committee was obtained prior tostudy.

Each patient was analyzed in detail with relevant clinical history, examinations and laboratory investigations like CBC with ESR, Montoux test, sputum AFB, and radiological investigations like chest and abdominal X ray, USG abdomen, CT abdomen etc. Pre-operative and operative details were recorded.

Results:

Table 1: Age wise distribution of Cases.

Agegroup	No. Ofpatients	Percentage
1-10	0	0
11-20	9	22.5
21-30	13	32.5
31-40	7	17.5
41-50	5	12.5
51-60	4	10
61-70	2	5
Total	40	100

Table 2: Sex wise distribution of Cases.

Sex	No. Ofpatients	Percentage
Male	14	35
Female	26	65
Total	40	100

Table 3: Clinical features of Study Participants.

Symptoms	No. ofpatients	Percentage
Pain Abdomen	40	100
Vomiting	33	82.5
Fever	35	87.5
Constipation	21	52.5
Lump Abdomen	6	15
Weight Loss	27	67.5
Anorexia	23	57.5
Ascites	4	10
Cough & Sputum	9	22.5
Diarrhea	11	27.5
Night Sweats	10	25
Urinary Complaints	7	17.5
Incidental	3	7.5

Table 4: Site of Tubercular Involvement in Gastrointestinal Tract.

Site	No. ofpatients	Percentage
Duodenum	2	5
Jejunum	4	10
Ileum	21	52.5
I.C.junction	7	17.5
Ascendingcolon	2	5
Transversecolon	1	2.5
Descendingcolon	1	2.5
Sigmoidcolon & Rectum	2	5
Total	40	100

Age group most commonly affected were of 11 to 30 years (55% of cases). Distribution of the Intestinal TB decreases at extreme of ages. Out of 40 cases, 35% were male and rest 65% was female. Female to male ratio is 1.86:1. Pain Abdomen was presenting complaint of all patients. Followed by fever, Vomiting and Weight loss respectively. Ileum was the commonest site of involvement for intestinal tuberculosis (52.5%), followed by I. C. junction (17.5%). (Table 1-4)

Discussion:

Abdominal TB is one of the most prevalent forms of extrapulmonarydisease.

Gastrointestinal involvement had beenreported to be 55-90 % in patients with active pulmonary TBbefore the advent of specific anti-TB treatment. But it wasregressed to 25 % after the development of specific antitubercular drugs.

Abdominal TB has an insidious course like any other chronic infectious diseasewithout any specific laboratory,radiological or clinical findings. Abdominal TB is again on the rise all over the world with theresurgence ofmultidrug resistant TB and with AIDS pandemic.[8]40 cases of intestinal tuberculosis were studied and followed up in present study. 55% of cases were of 11 to 30 years. Highest incidence was seen among the age group of 21-30 years. This indicates that adolescent and young adults are most commonly affected. Previous researchers also mentioned that isolated intestinal tuberculosis is most commonlyseen in the young adults in the secondand third decades of life. This conditionis common in the lower socio-economic groupsof the population.[9-10]

Out of 40 cases, 35% were male and rest 65% was female. Female to male ratio is 1.86:1. While pulmonary tuberculosisaffects males more commonly, intestinaltuberculosis is 3 to 4 times more common in females.[11-12]In an earlier study, it hasbeen shown that the higher preponderance ofthe disease in females could be due to theirgreater chances of swallowing tubercle bacilli by contamination of their hands.[13] Abdominal pain is the commonest symptom (Present in all cases). This is followed by fever (87.5%), Vomiting (82.5%) and Weight loss (67.5%) respectively. Palpable abdominal lump is less common finding, (Present in 15% of cases), although it denotes advanced disease. Symptoms and signs of intestinal tuberculosisdepend on the site, extent, duration andtype of intestinal involvement.

The patientsmay manifest with symptoms and signs dueto the tuberculous process itself, e.g. fever,weakness, anorexia, night sweats and weightloss, ulceration of the bowelresulting in abdominal discomfort, diarrhea,manifestations of malabsorption, perforationand, rarely, haemorrhage,[14,15]constrictive lesion like strictures, hyperplasticgranulomas and adhesions producing featuresof intestinal obstruction e.g. post-prandialdistress and distension, nausea, vomiting, constipation,attacks of colicky pain, rolling of'ball of wind', and visible peristalsis. Examinationof such patients with features of sub-acuteintestinal obstruction may also show a lumpin the right iliac fossa due to thickening of thecaecum and ascending colon. Appendicealinvolvement may present as acute appendicitisor as recurrent attacks of pain in the rightiliac fossa.[16]

Intestinal tuberculosis accounts for 15% of all intestinal obstructions and 5 to 7 % of all gastrointestinal perforations,[17]which are the main indications for surgery. TB still constitutes the most important single etiological factor in ulcero-

constrictive lesions of the intestine in India.[18]Site wise distribution of present study shows that ileum is the commonest part of intestine involved (52.5%) followed by ileocaecal junction (17.5%).Although some previous studies shows that the commonest site for tuberculous involvement of the bowel was the ileocaecal region.[17,19]The fatty coat of the tubercle bacilli protectsthe organisms against peptic digestion and thusthe bacilli reach the small intestine undestroyed.The frequency of lesions produced by them indifferent parts of the intestine, to some extent,depends on their local concentration. Theorganisms particularly settle at the sites ofincreased physiological stasis of abundantlymphoid tissue and areas of increased absorptiverates.[20]

Conclusion:

In present study, Ileum was most commonly affected site in Intestinal TB followed by Ileo-Caecal junction, its surgical removal was necessary to treat the condition. Age group most commonly affected were of 11 to 30 years. Female to male ratio was 1.86:1. Pain Abdomen was presenting complaint of all patients, followed by fever, Vomiting and Weight loss respectively.

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