



**ORIGINAL RESEARCH PAPER**

**Surgery**

**A CLINICAL STUDY OF VARIOUS PRESENTATIONS OF ABDOMINAL TUBERCULOSIS, EVALUATION AND MANAGEMENT**

**KEY WORDS:** Abdominal Tuberculosis, Clinical Presentations

<b>Dr. Tushar Padvi</b>	Senior year Resident Doctor, Department of General Surgery, New Civil Hospital, Surat
<b>Dr. Mittal Gaykavad</b>	Third year Resident Doctor, Department of General Surgery, New Civil Hospital, Surat.
<b>Dr. Jignesh Shah</b>	Additional Professor, Department of General Surgery, New Civil Hospital, Surat.

**ABSTRACT**

**Introduction:** Abdominal tuberculosis includes tuberculous infection of gastrointestinal tract, mesentery, lymph nodes and omentum, peritoneum and solid organs like liver and spleen. The initial clinical presentations are nonspecific and no single laboratory investigation is pathognomonic. Abdominal tuberculosis with an acute abdomen presents as an enormous challenge to the surgeon. **Materials And Methods:** This is a two-year retrospective observational study of 30 Patients who presented with abdominal tuberculosis at the department of General surgery, New Civil Hospital and Government Medical college Surat from June 2019 to December 2021 were selected. The relevant clinical information (history & examination), laboratory results (ESR & CBNAAT), microbiological and radiological (CECT abdomen) investigations were recorded. Histopathological examination of all the resected / excised specimens was done. **Results:** Out of 30 Patients with Abdominal Tuberculosis, the average age of the participants was 30.7 years with a slight male predominance (Male: Female =2.75:1). Abdominal pain (90%) was the most common presenting symptom followed by vomiting (46.66%) and fever (36.66%). The Mesenteric lymph node is the most commonly affected site of involvement. The commonest operative findings adhesion of bowel (26.6%), followed by tubercle over peritoneum / bowel (20.0%), perforations (13.33%) stricture. All the 15 resected / excised tissue specimens (7 cases of intestinal resection and 8 cases of intestinal, omental and lymph nodes biopsies) showed epithelioid granulomas. All patients were put on anti-tubercular treatment and majority showed good response to therapy. **Conclusion:** Abdominal tuberculosis is a major public health concern. Vague symptoms lead to diagnostic delay. A high index of suspicion, proper evaluation and therapeutic trial in suspected patients is essential for an early diagnosis, in order to minimize complications.

**INTRODUCTION**

Tuberculosis is a life-threatening disease which can virtually affect any organ system [1]. Global burden is nearly 12 million. The prevalence of TB has increased in both immunocompetent and immune-compromised. The primary site of TB is usually lung, from which it can get disseminated into other parts of the body. Abdominal Tuberculosis is the 6th most frequent form of extra pulmonary Tuberculosis.

The term abdominal tuberculosis refers to tuberculous infection of the gastrointestinal tract, mesenteric lymph node, peritoneum and Omentum, and of solid organs related to gastrointestinal tract such as liver, spleen and pancreas. The diagnosis can be difficult as it presents with nonspecific clinical and radiological features and requires high degree of suspicion for diagnosis.

The abdominal TB, which is not so commonly seen as pulmonary TB, can be a source of significant morbidity and mortality and is usually diagnosed late due to its nonspecific clinical presentation [3].

**Indications For Surgery:**

Responsiveness to medical treatment alone is a positive sign in Abdominal T.B Cases, so early diagnosis can prevent unnecessary surgical intervention [4]. Surgery is absolutely indicated as in cases of non-resolving intestinal obstruction, perforation and abscess or fistula formation. All the diagnosed cases should receive at least 6month of antituberculosis therapy regimen is recommended as per the revised national tuberculosis program guidelines + NTEP Guidelines, many clinicians extend the treatment regimen to 9 or 12 months.

**AIM AND OBJECTIVES**

To study the Socio-demographical data, various clinical presentations and different sites of involvement in Patients of Abdominal -Tuberculosis admitted in New Civil Hospital, Surat

**MATERIALS AND METHODS**

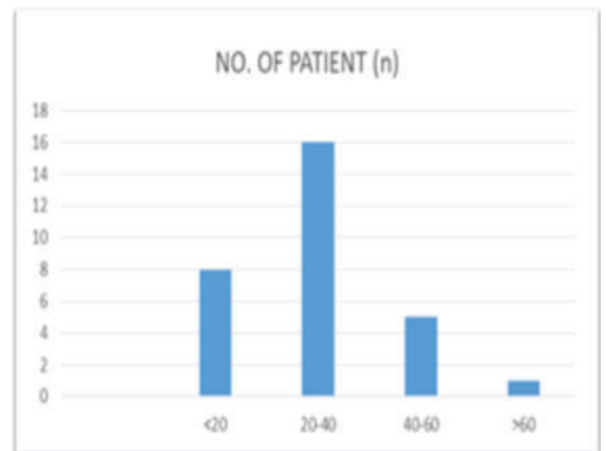
A record based retrospective clinical study was conducted in the New Civil Hospital, Surat during the year 2019-2021 in which data of 30 Abdominal Tuberculosis Positive patients were collected from surgical Indoor Section and Emergency department purposively. The Study subjects were selected in a non-random manner & consequently. The data was collected from the records in a retrospective manner and was further analysed using excel.

**Observations**

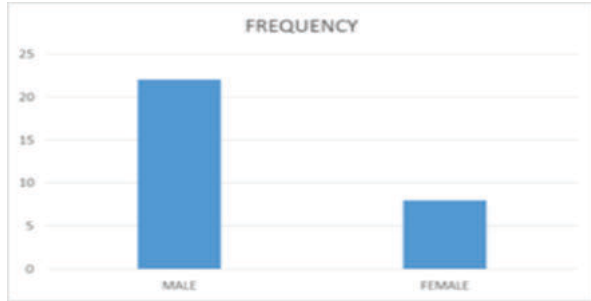
**Socio-demographic Profile**

The Study included 30 patients of Abdominal Tuberculosis. The average age of the patients included in the study was 30.7 years

The youngest patient was 14 years old and the oldest being was 61 years old.

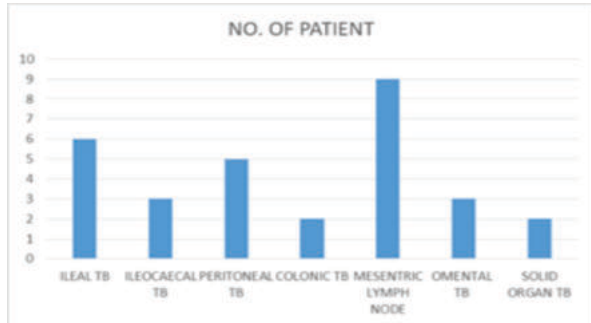


Majority of the Patients belonged to the age group of 20-40 years old (n=30).



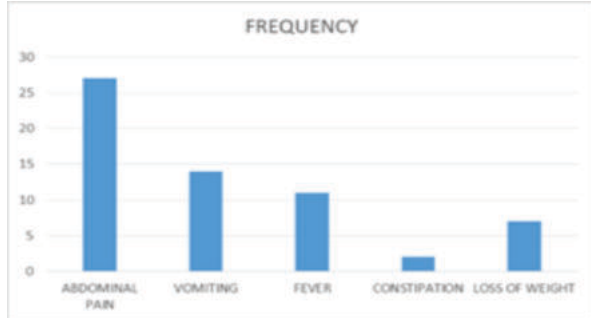
Of the 30 cases studied, 22 (73.33 %) cases were male and remaining 8 cases (26.66%) were female. The male to female ratio was 2.75:1

**Sites Of Involvement In Abdominal T.B**



Mesenteric lymph node was found to be the most common site of involvement in abdominal tuberculosis, about 9(30%) patients presented with mesenteric lymphadenitis followed by ileal tuberculosis and peritoneal tuberculosis.

**Clinical Presentations:**  
(SYMPTOMS LEADING TO ADMISSION)



It is evident from the study that 90.0 % of the patients had abdominal pain as the major symptom. 40% of the patients had complaints of Vomiting preceded by fever in some cases. Weight loss and bowel disturbances were observed in 9 patients (23.33% and 6.66 %) respectively.

The commonest operative findings were adhesion band of bowel (26.6%), followed by tubercle over peritoneum/bowel (20.0%) and perforations (13.33%) stricture.

15 i.e 50% of the cases underwent the procedure of Resection/Biopsies. All the 15 resected/excised tissue specimens (7 cases of intestinal resection and 8 cases of intestinal, omental and mesenteric lymph nodes biopsies) showed epithelioid granulomas.

**CONCLUSIONS**

From the Study, It was found that Mesentric Lymph node was the Commonest site of Involvement among the Study Subjects (Contrary to the belief of Ileal T.B). Majority of the Patients (90%) had Abdominal pain as the main symptom for admission followed by Vomiting and Fever. The commonest operative findings were adhesion band of bowel (26.6%), followed by tubercle over peritoneum/bowel (20.0%).

Epithelioid Granulomas were evident in all the specimens (n=15) evaluated post resection/biopsy. Among the 30 Patients studied, Males & Individuals of age Group 20-40 years of age were found to be more prone to the development of Abdominal Tuberculosis compared to the others in same demographic strata.

**Future Directions**

Abdominal tuberculosis is a major public health concern. The symptoms of abdominal TB can be nonspecific. Various imaging feature a high index of suspicion, proper evaluation and therapeutic trial in suspected patients is essential for an early diagnosis, in order to minimize complications. and radiological signs are useful in making a diagnosis of abdominal TB.

**REFERENCES:**

- Rosado E, Penha D, Paixao P, Costa AMD, Amadora PT. Abdominal tuberculosis - Imaging findings. Educational exhibit; ECR. 2013;C-0549
- Peda veerajuu E. Abdominal tuberculosis. In: Textbook of pulmonary and extrapulmonary tuberculosis. 3rd edition. New Delhi: interprint 1998
- Mukewar S, Mukewar S, Ravi R, Prasad A, S Dua K. Colon tuberculosis: endoscopic features and prospective endoscopic follow-up after anti-tuberculosis treatment. Clin Transl Gastroenterol. 2012;3:e24
- Uzunkoy A, Harma M, Harma M. Diagnosis of abdominal tuberculosis: experience from 11 cases and review of the literature. World J Gastroenterol. 2004;10:3647-3649.
- Sharma MP, Bhatia V. Abdominal tuberculosis. Indian J Med Res. 2004;120:305-315
- Mamo, J.P., Brij, S.O. and Enoch, D.A. (2013) 'Abdominal tuberculosis: a retrospective review of cases presenting to a UK district hospital', QJM, 106(4), pp.347-354. Available at: <https://doi.org/10.1093/qjmed/hct003>.
- Noori, I.F. (2015). Abdominal Tuberculosis : Clinical Presentation , Diagnosis , Outcome and Experience with 11 Cases.
- Pathak, P., Sahu, S.K., & Agrawal, S. (2016). Clinico-Pathological Profile and Surgical Outcome of Patients of Gastrointestinal Tuberculosis Undergoing Laparotomy. Chirurgia, 111 6, 487-492.
- Uygun-Bayramciqli, O., Dabak, G., & Dabak, R. (2003). A clinical dilemma: abdominal tuberculosis. World journal of gastroenterology, 9 5, 1098-101.
- Akinkuolie, A.A., Adisa, A.O., Agbakwuru, E.A., Egharevba, P.A., & Adesunkanmi, A.R. (2008). Abdominal tuberculosis in a Nigerian teaching hospital. African journal of medicine and medical sciences, 37 3, 225-9.
- Al-Mashat, F.M., Kensarah, A., Meccawy, A.A., Awan, B.A., & Hasher, N.B. (2004). ABDOMINAL TUBERCULOSIS: REVIEW OF 78 CASES. the egyptian journal of surgery, 23.
- Chen, Y.M., Lee, P.Y., & Perng, R.P. (1995). Abdominal tuberculosis in Taiwan: a report from Veterans' General Hospital, Taipei. Tubercle and lung disease : the official journal of the International Union against Tuberculosis and Lung Disease, 76 1, 35-8.
- Chang, H., Leu, S.Y., Hsu, H., & Lui, W.Y. (1991). Abdominal tuberculosis—a retrospective analysis of 121 cases. Zhonghua yi xue za zhi = Chinese medical journal; Free China ed, 47 1, 24-30.
- Demir, K., Okten, A., Kaymakolu, S., Dinçer, D., Beşik, F., Cevikbas, U., Ozdil, S., Bostas, G., Mungan, Z., & Cakaloglu, Y. (2001). Tuberculous peritonitis – reports of 26 cases, detailing diagnostic and therapeutic problems. European Journal of Gastroenterology & Hepatology, 13, 581-585.
- Muneef, M.A., Memish, Z.A., Mahmoud, S.A., Sadoon, S.A., Bannatyne, R.M., & Khan, Y. (2001). Tuberculosis in the belly: a review of forty-six cases involving the gastrointestinal tract and peritoneum. Scandinavian journal of gastroenterology, 36 5, 528-32.
- Usta, M., Urganci, N., Dalgic, N., Kizilkan, N.U., Kurtaraner, T., & Karadağ, Ç.A. (2017). Clinical Presentation in a Series of Eight Children with Abdominal Tuberculosis: Experience of a Single-Center in Turkey. Iranian Journal of Pediatrics, 27.
- Ramesh, J.C., Banait, G.S., & Ormerod, L.P. (2008). Abdominal tuberculosis in a district general hospital: a retrospective review of 86 cases. QJM : monthly journal of the Association of Physicians, 101 3, 189-95.
- Nayagam, J.S., Mullender, C., Cosgrove, C.A., & Poullis, A.P. (2016). Abdominal tuberculosis: Diagnosis and demographics, a 10-year retrospective review from a single centre. World journal of clinical cases, 4 8, 207-12.
- Al-Zanbagi, A., & Shariff, M.K. (2021). Gastrointestinal tuberculosis: A systematic review of epidemiology, presentation, diagnosis and treatment. Saudi Journal of Gastroenterology : Official Journal of the Saudi Gastroenterology Association, 27, 261-274.
- Sahibole, A.S., Farooq, R., Ali, H.M., Bukhari, S.J., & Al Ozaibi, L. (2023). Abdominal Tuberculosis Presenting With Small Bowel Obstruction: A Case Report. Cureus, 15.