ORIGINAL RESEARCH

Assessment of outcome of management of cases of abdominal tuberculosis

[1]Dr. Abhishek Jina, [2]Dr. Durgesh Tripathi, [3]Dr. Anand Jaiswal, [4]Dr. Diwkardutta Tripathi

[1]Associate Professor, [2]Assistant Professor, [3]Professor, [4]Third Year Resident, Department of Surgery, BRD Medical College, India

Corresponding Author
Dr. Diwkardutta Tripathi
Third Year Resident, Department of Surgery, BRD Medical College, India
Email: Diwakarnirala16191@gmail.com

Received: 09 December, 2023 Accepted: 04 January, 2024

ABSTRACT

Background: Abdominal tuberculosis may present clinically as an acute abdomen, either due to bowel obstruction, perforation or mass in right lower abdomen mimic acute appendicitis or appendicular mass. The present study was conducted to assess the outcome of managing cases of abdominal tuberculosis.**Materials & Methods:** 30 cases of abdominal tuberculosis of both genders underwent blood investigations and radiological examinations. All were managed with surgery. All specimens were assessed histopathologically.**Results:** Out of 30 patients, males were 17 (56.7%) and females were 13 (43.3%). ESR was raised in 18 (72%) and normal in 7 (28%) cases. Hemoglobin level was normal in 4 (!3.3%), mild in 3 (10%), moderate in 18 (60%) and severe in 5 (16.7%) cases. The bowel resection and anastomosis was performed in 4, right hemicolectomy in 1, ileostomy in 10, adhesiolysis in 10, closure of perforation in 5 and splenectomy in 1 patient. The complications were surgical site infection in 5 cases, wound dehiscence in 2, burst abdomen in 1, anastomotic leak in 2 and fecal fistula in 1 case. Out of 30 cases, 27 cured and 3 expired. The difference was significant (P< 0.05).**Conclusion:** Surgical management was the bowel resection and anastomosis, right hemicolectomy, ileostomy, adhesiolysis, closure of perforation and splenectomy.

Keywords: Abdominal tuberculosis, adhesiolysis, hemicolectomy

INTRODUCTION

Abdominal tuberculosis may present clinically as an acute abdomen, either due to bowel obstruction, perforation or mass in right lower abdomen mimic acute appendicitis or appendicular mass. Despite advances in drug therapy and diagnostic facilities, tuberculosis remains a major health problem in developing countries, especially Africa and Indo-Pak subcontinent.[1]

The majority of patients belong to the poor socio-economic class. Poor nutritional status, lack of health facilities, and poor pasteurization of milk have contributed to this problem. Preoperative diagnosis of abdominal tuberculosis is difficult. A high index of clinical suspicion and laparoscopy help to establish the diagnosis.[2] Abdominal Tuberculosis can affect any age group but is more common in young people at the peak of their productive life. The presentation of abdominal tuberculosis in this age group has great economic impact since these are people in their most productive years and this disease imposes a considerable burden on their families and the society as a whole.[3]

The diagnosis of abdominal TB in initial stages is difficult as the clinical features are vague, diverse and there is no specific diagnostic test. It remains a considerable diagnostic challenge, especially in the absence of pulmonary infection, as the disease can mimic various gastrointestinal disorders, particularly inflammatory bowel disease, colonic malignancy, or other gastrointestinal infections.[4]

Diagnosis and management of these patients are challenging as underlying pathology is usually obscure and disease is associated with significant morbidity and mortality. The treatment of abdominal tuberculosis is mainly conservative (non-operatively) with anti-tuberculous therapy and surgical treatment is reserved for complications.[5] Surgical management of intestinal tuberculosis has changed considerably from bypass surgery and hemicolectomy to conservative resections and stricturoplasty.[6] The present study was conducted to assess the outcome of the management of cases of abdominal tuberculosis.

MATERIALS & METHODS

The present study consisted of 30 cases of abdominal tuberculosis of both genders. All gave their written

consent to participate in the study. Ethical approval of the study was obtained from the institutional ethical committee.

Data such as name, age, gender etc. was recorded. A thorough clinical examination was carried out. All patients underwent blood investigations and radiological examinations. All were managed with surgery. All specimens were assessed histopathologically. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 30		
Gender	**Male**	**Female**
Number	17 (56.7%)	13 (43.3%)

Table I shows that out of 30 patients, males were 17 (56.7%) and females were 13 (43.3%).

Table II Laboratory findings

Tests	Findings	Number	Percentage
ESR	Raised	18	72%
	Normal	7	28%
Hemoglobin	Normal	4	13.3%
	Mild	3	10%
	Moderate	18	60%
	Severe	5	16.7%
Surgical management	Bowel resection and anastomosis	4	21%
	Right hemicolectomy	1	5.3%
	Ileostomy	10	52.6%
	Adhesiolysis	10	52.6%
	Closure of perforation	5	26.3%
	Splenectomy	1	5.3%

Table II shows that ESR was raised in 18 (72%) and normal in 7 (28%) cases. Hemoglobin level was normal in 4 (!3.3%), mild in 3 (10%), moderate in 18 (60%) and severe in 5 (16.7%) cases. The bowel resection and anastomosis were performed in 4, right hemicolectomy in 1, ileostomy in 10, adhesiolysis in 10, closure of perforation in 5 and splenectomy in 1 patient.

Table III Post- op complications

Complications	Number	Percentage
Surgical site infection	5	26.3%
Wound dehiscence	2	10.5%
Burst abdomen	1	5.3%
Anastomotic leak	2	10.5%
Fecal fistula	1	5.3%

Table III, graph I show that complications were surgical site infection in 5 cases, wound dehiscence in 2, burst abdomen in 1, anastomotic leak in 2 and fecal fistula in 1 case.

Graph I Post-op complications

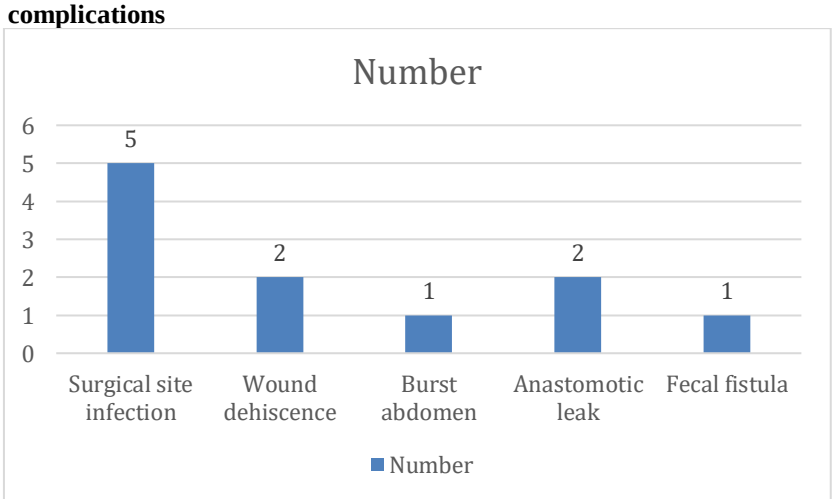

Table IV Mortality rate

Mortality rate	Number	P value
Cured	27	0.01
Expired	3	

Table IV shows that out of 30 cases, 27 cured and 3 expired. The difference was significant (P< 0.05).

DISCUSSION

Tuberculosis, especially in developing countries is a major health problem, and causes significant morbidity and mortality. These countries have problems of poverty, overcrowding, and poor sanitation.[7]The population is ignorant and malnutrition is prevalent. World Health Organization (WHO) declared it a global emergency and is the most important communicable disease worldwide. In India, tuberculosis is still considered as a social disease, reflecting the standards of living in a community.[8] According to WHO report in 2013, there were an estimated 8.6 million annual incidence of TB globally, and India has the world's largest tuberculosis cases which are around 26% of the world TB cases.[9]The present study was conducted to assess the outcome of the management of cases of abdominal tuberculosis.

We found that out of 30 patients, males were 17 (56.7%) and females were 13 (43.3%). Charokaret al[10] highlighted the role of surgery in the diagnosis and treatment of abdominal tuberculosis. 72 cases of abdominal tuberculosis were operated during the study period. The median age was 30 years with male to female ratio of 3:2. Primary abdominal tuberculosis was 79.2%. Intestinal tuberculosis was the commonest with terminal ileum and ileo-caecal region being predominantly involved.5 8% of the patients required emergency surgery. Surgical procedures performed were resection of the diseased segment including right hemi-colectomy 32 (44.44%), release of band/adhesions 23 (31.9%), perforation repair 11(15.3%), stricturoplasty 4 (5.5%), etc.

We found that ESR was raised in 18 (72%) and normal in 7 (28%) cases. Hemoglobin level was normal in 4 (13.3%), mild in 3 (10%), moderate in 18 (60%) and severe in 5 (16.7%) cases. The bowel resection and anastomosis was performed in 4, right hemicolectomy in 1, ileostomy in 10, adhesiolysis in 10, closure of perforation in 5 and splenectomy in 1 patient. Balochet al[11] evaluated the varied presentation, morbidity/ mortality and outcome of various surgical procedures done in patients with abdominal tuberculosis in a total of 86 patients. The mean age of patients was 35.6 years and male to female ratio of 1:2. Primary intestinal tuberculosis was found in 78%. About 52.3% of patients had single or multiple strictures involving the distal ileum and ileocaecal region. 27.9% of patient had mass in the ileocaecal region. Perforation was recorded in 19.8% cases. Mortality was 2.3%. Major postoperative complications occurred in 13.9% of patients. All patients were prescribed anti-tuberculosis drugs for a period of 12 months. The median follow-up was 6 months. 82.5% of patients were doing well till the last visit.

We found that complications were surgical site infection in 5 cases, wound dehiscence in 2, burst abdomen in 1, anastomotic leak in 2 and fecal fistula in 1 case. Out of 30 cases, 27 cured and 3 expired. MukhopadhyayA et al[12] in their study seventy cases of Abdominal Tuberculosis (out of 718 cases of acute abdomen) were diagnosed and treated. The clinical presentations of acute abdomen included acute intestinal obstruction, perforative peritonitis and acute appendicitis etc. Terminal ileum and ileocaecal region were predominantly involved. The most common pathology was intestinal stricture with or without perforation. Most of the patients (approx 78.5%) required emergency surgery as a therapeutic intervention. A two-stage procedure was preferred in peritonitis and sepsis. Most of the remaining patients (12.8%) required surgery after initial conservative treatment for the first few days. Undiagnosed Abdominal Tuberculosis represents a notable percentage (10%) of patients who present with an acute abdomen as a surgical emergency.

Saaiqet al[13] in their study of 233 adult patients with abdominal tuberculosis, 110 (47.21%) were males and 123 (52.78%) females. The mean age was 28.21 +/- 5.75 years. The majority of our patients (80.68%) belonged to poor families. History of concomitant pulmonary tuberculosis was found in 23 (9.87%) patients. Family history of tuberculosis was found in 13 (5.57%) patients. Of the patients 157 (67.38%) presented with acute abdomen; strictures were the most common operative finding (n = 161; 69%); the patients needing hospitalisation were 204 (87.55%), with the mean hospital stay being 19.55 +/- 4.51 days. The in-hospital mortality was 5 (2.14%).

CONCLUSION

Authors found that surgical management was the bowel resection and anastomosis, right hemicolectomy, ileostomy, adhesiolysis, closure of perforation and splenectomy.

REFERENCES

1. Balasubramanian R, Nagarajan M, Balambal R, Tripathy SP, Sundararaman R, Venkatesan P. Randomised controlled clinical trial of short course chemotherapy in abdominal tuberculosis: a five-year report. Int J Tuberc Lung Dis. 1997;1:44-51.
2. Kapoor VK. Abdominal tuberculosis: the Indian contribution. Indian J Gastroenterol. 1998;17:141-7.
3. Setty G. Clinico Pathological Study of Abdominal Tuberculosis. Bangalore: RGUHS; 2006. 6. Sircar S, Taneja V A, Kansara U. epidemiology and clinical

presentation of abdominal tuberculosis: A retrospective study. J Indian Med Assoc. 1996;94(9):342-4.
4. Sharma MP, Bhatia V. Abdominal tuberculosis. Indian J Med Res. 2004;120:305-15. 8. AmitAgrawal. Clinicopathological study of Abdominal Tuberculosis. Rewa. 2006.
5. Awasthi S, Manoj S, Faiyaz A, Ashutosh K, Shyamoli D. Abdominal tuberculosis: A diagnostic dilemma. JCDR. 2015;9(5):1-3.
6. Das P, Shukla H S. Clinical diagnosis of abdominal tuberculosis. Br J Surg. 1976;63(12):941-6.
7. Kumar R, Saddique M, Iqbal P, Khan NA. Abdominal tuberculosis: clinical presentation and outcome. Pakistan J Surg. 2007;23(4):242-4.
8. Akbar M, Islam F, Haider IZ, Naveed D, Akbar I, Khattak I. Surgical management of tuberculous small bowel obstruction. J Ayub Med Coll Abbottabad. 2010,22:171-5.
9. Pandey A, Sahu D, Bakkali T, Reddy DC, Venkatesh S, Kant S, Bhattacharya M, Raj Y, Haldar P, BhardwajD, Chandra N. Estimate of HIV prevalence and number of people living with HIV in India. BMJ open. 2012;2(5):e000926.
10. Charokar K, Garg N, Jain AK. Surgical management of abdominal tuberculosis: a retrospective study from Central India. International Surgery Journal. 2016 Dec 13;3(1):23-31.
11. Baloch et al. A study of 86 cases of abdominal tuberculosis. Journal of Surgery Pakistan (International) 13 (1) January - March 2008; 30-32.
12. Mukhopadhyay A, Dey R, Bhattacharya U. Abdominal tuberculosis with an acute abdomen: our clinical experience. Journal of clinical and diagnostic research: JCDR. 2014 Jul;8(7):NC07.
13. Saaiq M, Shah SA, Zubair M. Abdominal tuberculosis: epidemiologic profile and management experience of 233 cases. JPMA-Journal of the Pakistan Medical Association. 2012 Jul 1;62(7):704.