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Frequency of Abdominal Tuberculosis in Cases Presenting with Acute Abdomen

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ABSTRACT

Objective: To determine the frequency of abdominal tuberculosis in cases presenting with acute abdomen. **Study design:** This was a cross sectional study. **Place of study:** Department of Surgery, Sheikh Zayed Hospital. Rahim Yaar Khan. **Period of study:** July 2017 to December 2017. **Methodology:** The cases of both genders with age 15 years or more were included in this study. The diagnosis of acute abdomen was made where there was pain in abdomen of 5 or more on visual analogue scale and absolute constipation within last 24 hours with or without vomiting. The cases with any malignancy and those with end stage renal, liver or heart disease will be excluded. The cases will undergo surgery at the same institute by consultant surgeon and biopsy will be taken from the affected intestinal or omentum tissue and presence of granulomatous disease on it will reveal it as abdominal TB. **Results:** In the present study there were 100 cases, that presented with acute abdomen. The mean age was 39.56±10.23 years. Abdominal TB was detected in 25 (25%) of the cases. There was no significant difference in terms of gender with p= 0.78. Abdominal TB was significantly high in cases that had age group 40 or less years where it was seen in 22 (30.98%) cases with p value of 0.03. This was also more common that had concomitant pulmonary TB where it was seen in 6 (35.29%) cases; though this was not significant with p value of 0.21.

Conclusion; Abdominal TB was detected in every 4th case presented with acute abdomen and it is significantly high in cases that had age group 40 year or less.

Keywords; Acute abdomen, TB, Omentum tissue, Extra pulmonary tuberculosis (EPTB)

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INTRODUCTION

Tuberculosis is one of the disease found form the ancient times and its number was decreased markedly in the developed countries due to effective chemotherapeutic regimen and better diagnostic facilities. But in the recent times due to emergence of HIV and multiple co morbid conditions its number is again on the rise and data is widely variable worldwide.[1,2]

Extra pulmonary tuberculosis (EPTB) can involve any part of the body including gastrointestinal (GI) tract. It can not only involve peritoneum to lead for adhesion formation but can also lead to lymph node enlargement or intestinal obstruction; which can in turn present as a surgical emergency the form o acute abdomen. The initial clinical presentations are nonspecific as the disease involves multiple sites with different morphology. No single laboratory investigation is pathognomonic. Bacterial culture and tissue histopathology are considered as confirmatory investigations; though they are time consuming, and immunological tests are expensive.[3,4]

Moreover, Abdominal Tuberculosis with an acute abdomen presents as an enormous challenge to the surgeon. A surgeon has to rely on his clinical judgement and surgical acumen to determine the extent of surgical management in an unprepared, physiologically compromised patient in the emergency setting.[5,6]

OBJECTIVE

To determine the frequency of abdominal tuberculosis in cases presenting with acute abdomen.

METHODOLOGY

Study Design: Cross sectional study.

Place of Study: Department of surgery, Sheikh Zayed Hospital, Rahim Yar Khan

Duration of Study: Six months, July 2017 to December 2017

Sample Technique: Non-probability-consecutive sampling.

Methods:

The cases of both genders with age 15 years or more were included in this study. The diagnosis of acute abdomen was made where there was pain in abdomen of 5 or more on visual analogue scale and absolute constipation within last 24 hours with or without vomiting. The cases with any malignancy and those with end stage renal, liver or heart disease will be excluded. The cases will undergo surgery at the same institute by consultant surgeon and biopsy will be taken from the affected intestinal or omentum tissue and presence of granulomatous disease on it will reveal it as abdominal TB.

Statistical Analysis:

Data was analyzed with the help of SPSS version 22. Post stratification Chi-Square test was applied taking P-value $\leq$ 0.05 as significant.

RESULTS

In the present study there were 100 cases, that presented with acute abdomen. The mean age was 39.56±10.23 years. Abdominal TB was detected in 25 (25%) of the cases as shown in figure 01. There was no significant difference in terms of gender with p= 0.78 as shown in Table 1.

Table 1: Abdominal TB and Gender

Gender	Abdominal TB		Total
	Yes	No	
Male	17 (26.98%)	46 (73.02%)	63 (100%)
Female	08 (21.62%)	29 (78.38%)	37 (100%)
Total	**25 (25%)**	**75 (75%)**	**100 (100%)**

P Value = 0.43, p= 0.78

Abdominal TB was significantly high in cases that had age group 40 or less years where it was seen in 22 (30.98%) cases with p value of 0.03 as in Table 2.

Table 2: Abdominal TB and age groups

Age groups	Abdominal TB		Total
	Yes	No	
40 or less	22 (30.98%)	49 (69.02%)	71 (100%)
>40	3 (10.34%)	26 (89.66%)	29 (100%)
Total	**25 (25%)**	**75 (75%)**	**100 (100%)**

p value = 0.04, p=0.03

This was also more common that had concomitant pulmonary TB where it was seen in 6 (35.29%) cases; though this was not significant with p value of 0.21 as shown in Table 3.

Table 3: Abdominal TB and pulmonary TB

Pulmonary TB	Abdominal TB		Total
	Yes	No	
Yes	6 (35.29%)	11 (64.71%)	17 (100%)
No	19 (22.89%)	64 (77.11%)	83 (100%)
Total	**25 (25%)**	**75 (75%)**	**100 (100%)**

p value = 0.03, p= 0.21

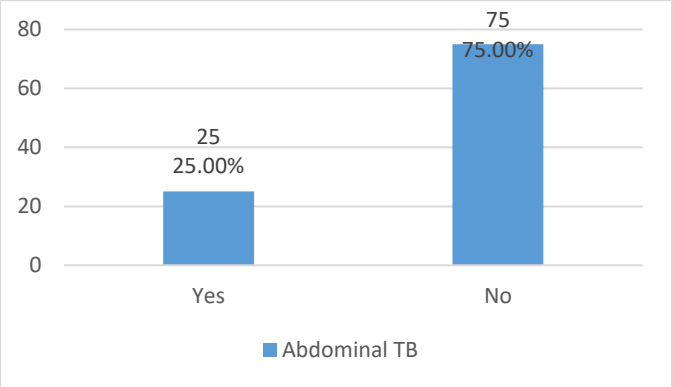

Figure 1: Abdominal TB detection

DISCUSSION

Tuberculosis is one of the most common causes of chronic infectious diseases which are present since the ancient times. TB is a great mimicker of all the diseases and its presentation is widely variable and can present in almost any scenario. Extra pulmonary tuberculosis especially abdominal, can present either as a spectrum of vague un identified and un specified symptoms or can present as a surgical emergency in the form of acute abdomen.

In the preset study the abdominal TB was detected in 25 (25%) of the cases presented with acute abdomen. This finding was close the findings of the previous studied carried out with similar protocol. According to a study done by Farooq T et al abdominal TB was seen in 54 (29.03%) of cases presented as acute abdoemn.[7] In another study by Shaikh MS et al, in cases presenting with acute abdomen, tuberculosis was seen in 32 (16%) of the cases.[8] Even higher results were seen in another study, that was also seen in Pakistan, where abdominal tuberculosis was seen in 19 (51.4%) of cases presenting with acute abdomen.[6] The reason of this difference can be explained by the difference in the prevalence of the disease and also reveal the underlying tuberculosis program of the vicinity.

Abdominal tuberculosis was more seen in cases that had age group less than 40 years as compared to more where it was seen to affect 22 (30.98%) cases with p value of 0.03. This was also seen by the studies done by various authors where the most prevalence of this disease was seen in age group of 20 to 40 years; though not all of these studies find this difference as statistically significant.[9-11]

Detection of abdominal TB in cases with acute abdomen was also more in cases that had associated pulmonary disease as well; though this difference was not statistically significant (p= 0.21). A study by Sheikh MS et al they found 12 (37.5%) of cases that had associated pulmonary TB as well.[8] Other studies done in the past have revealed this number in 7-40% of the cases.[12-13]

CONCLUSION

Abdominal TB was detected in every 4th case presented with acute abdomen and it is significantly high in cases that had age group 40 year or less.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

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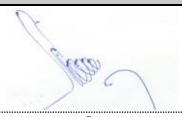
Dr. Haroon Ur Rasheed Assistant Professor, Surgery Sheikh Zayed Hospital, Rahim Yar Khan	Manuscript writing, Data collection,	
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