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Original Research

Assessment of cases of Tuberculosis - A Clinical Study

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***ABSTRACT*:**

Background: Tuberculosis is an infectious disease caused by the bacterium Mycobacterium tuberculosis, an acid-fast bacillus. The present study was conducted to assess the cases of tuberculosis in both genders. **Materials & Methods:** This study was conducted on 46 cases of tuberculosis of both genders. In all patients detailed clinical history and clinical examination was done. Liver function tests, viral markers, USG, CT, MRI and histopathology/microbiology & culture for mycobacteria were done. **Results:** Out of 46 patients, males were 32 and females were 14. The difference was significant (P< 0.05). Hepatic TB was seen in 20 males and 8 females and biliary TB was seen in 12 males and 6 females. The difference was significant (P< 0.05). Common symptoms in hepatic TB was fever (24), weight loss (18), jaundice (20), abdominal pain (22), hepatomegaly (25) and splenomegaly (21). In Biliary TB, symptoms were fever (14), weight loss (10), jaundice (13), abdominal pain (12), hepatomegaly (10) and splenomegaly (10). The difference was non- significant (P> 0.05). **Conclusion:** Authors found that common symptoms were fever, weight loss, jaundice, abdominal pain, hepatomegaly and splenomegaly.

Key words: Tuberculosis, Hepatomegaly, Splenomegaly

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INTRODUCTION

The world health organization (WHO) estimated that there were about 12 million prevalent cases of tuberculosis (TB) globally in 2012, with an estimated prevalence of 176 TB cases (all types) per 100 000 population.[1] Tuberculosis (TB) remains a significant public health issue in low-income and middle-income countries and is the leading cause of deaths as a single infectious disease, ranking above human immunodeficiency virus and acquired immune deficiency syndrome (HIV/AIDS).[2] The World Health Organization's (WHO) Global Tuberculosis Report 2017 reported 6.3 million new cases of TB among HIV-negative people in 2016, compared to 6.1 million in 2015. Similarly, the Global Burden of Diseases, Injuries and Risk Factors (GBD) Study 2016 estimated 9.0 million TB-HIV-negative incident cases (new and relapse cases) compared to 8.8 million in 2015.[3]

TB is an infectious disease caused by the bacterium Mycobacterium tuberculosis, an acid-fast bacillus that is spread mainly via the respiratory pathway. The GBD study provides estimates for all forms of TB, including pulmonary and extrapulmonary TB using the International Classification of Diseases (ICD-10) codes.[4]

Abdominal tuberculosis is rare in the Western population and is declining in incidence in certain parts of India. In developed countries the disease is largely limited to immigrants from areas of the world endemic for tuberculosis. Strict control of tuberculosis in dairy herds and pasteurization of milk have almost eliminated bovine tuberculosis in many countries; however, despite efforts aimed at effective treatment of tuberculosis, the disease is not uncommon in developing countries.[5] The present study was conducted to assess the cases of tuberculosis in both genders.

MATERIALS & METHODS

This study was conducted in the department of Chest & TB. It included 46 cases of tuberculosis of both genders. All patients were informed regarding the study and written consent was obtained. Ethical clearance was taken from institutional ethical committee.

The diagnosis of TB was confirmed by initial screening for standard TB symptoms (cough for > 2 wk, fever for > 2 wk, chest pain, and haemoptysis), have both smear (for acid-fast bacilli, AFB) and culture tests done on the sputum samples collected. A positive case for TB is defined as being positive either by smear and or culture; and reported an outcome measure – the TB prevalence based on smear and/or culture results.

In all patients detailed clinical history and clinical examination was done. Liver function tests, viral markers, USG, CT, MRI and histopathology/microbiology & culture for mycobacteria were done as and when required. Results were tabulated and subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 46		
Males	**Females**	**P value**
32	14	0.01

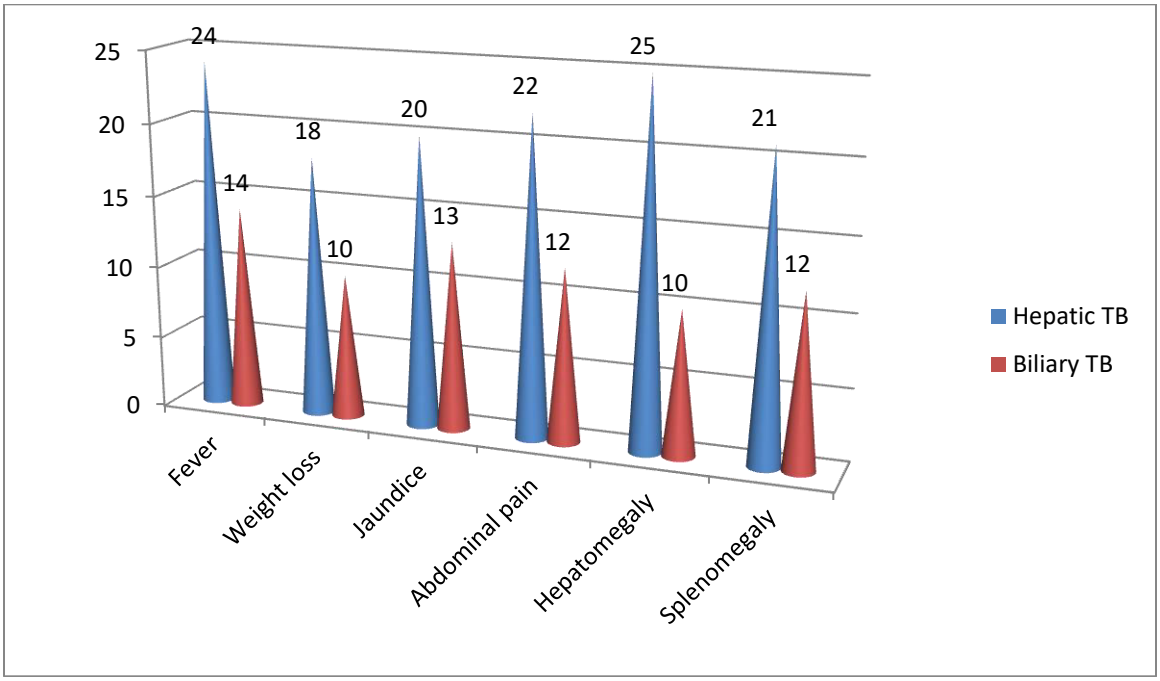
Table I shows that out of 46 patients, males were 32 and females were 14. The difference was significant (P< 0.05).

Table II Distribution of cases

Type	Males	Females	P value
Hepatic	20	8	0.05
Biliary	12	6	

Table II shows that hepatic TB was seen in 20 males and 8 females and biliary TB was seen in 12 males and 6 females. The difference was significant (P< 0.05).

Graph I Clinical features of hepatic and biliary type of tuberculosis



Graph I shows that common symptoms in hepatic TB was fever (24), weight loss (18), jaundice (20), abdominal pain (22), hepatomegaly (25) and splenomegaly (21). In Biliary TB, symptoms were fever (14), weight loss (10), jaundice (13), abdominal pain (12), hepatomegaly (10) and splenomegaly (10). The difference was non- significant (P> 0.05).

DISCUSSION

Tuberculosis (TB), which is caused by the Mycobacterium tuberculosis (MTB) complex, remains a major public health threat worldwide. According to the World Health Organization, there were 9.6 million new TB cases and 1.2 million deaths from TB in 2014.[6] China has the world's second largest population of TB patients (after India), with 41 million new cases of TB each year. The fifth national TB prevalence survey conducted in 2010 indicates that China has an estimated prevalence of 442 cases per 100 000 population. Although the prevalence of TB has decreased by more than half from 1990 to 2010, TB is still a major public health and socio-economic issue in China.[7]

Pulmonary cavitation is one of the most frequently observed clinical characteristics in TB, accounting for 440% of adults with pulmonary TB at the time of diagnosis. Pulmonary cavitation is the hallmark of TB disease and is responsible for delayed sputum culture conversion, poor clinical outcomes and infection transmission.[8] The present study was conducted to assess the cases of tuberculosis in both genders.

In this study, out of 46 patients, males were 32 and females were 14. Hepatic TB was seen in 20 males and 8 females and biliary TB was seen in 12 males and 6 females. Saber et al[9] The weighted prevalence for sputum smear positive TB cases was 249 per 100 000 adult population and that for bacteriologically confirmed TB cases was 293/100 000. Individuals aged 45 years comprised 55% (71/129) of the identified smear-positive cases, but just 28% (6793/ 24 648) of the notified TB cases. CXR screening identified more TB cases than symptom screening. When weighted for human immunodeficiency virus prevalence among notified new smear-positive cases, the overall case detection of incident TB cases in 2012 was between 37% and 48%.

We found that common symptoms in hepatic TB was fever (24), weight loss (18), jaundice (20), abdominal pain (22), hepatomegaly (25) and splenomegaly (21). In Biliary TB, symptoms were fever (14), weight loss (10), jaundice (13), abdominal pain (12), hepatomegaly (10) and splenomegaly (10). In a study by Megha et al[10], of 1145 recruited patients with TB, 84% were permanent residents with 88% living in 37 settlements that had complete maps available down to settlement level. Significant high- and low-rate spatial and space–time clusters were identified in two districts. The most likely cluster of high rate from both the purely spatial analysis and the retrospective space–time analysis were from the same geographical area. A significant secondary cluster was also identified in one of the densely populated areas of the study region.

Sharma et al[11] found that of the 3,483 adults who completed a questionnaire, 2,608 underwent chest radiography and sputum examination. They detected 26 bacteriologically confirmed TB cases and a prevalence of 10.0/1,000. They found 18 patients with smear positive TB, of whom 8 were new patients. More than half of patients with smear-positive TB (10, 56%) had previously been treated. Such patients may contribute to transmission of Mycobacterium tuberculosis and the high TB prevalence rate. Successful treatment of TB patients must be a priority.

CONCLUSION

Authors found that common symptoms were fever, weight loss, jaundice, abdominal pain, hepatomegaly and splenomegaly.

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