

Original Research

Evaluation of cases of Tuberculosis in Adults

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ABSTRACT:

Background: The present study was conducted to evaluate the cases of tuberculosis in adults. **Materials & Methods:** This study was conducted on 84 cases of tuberculosis. In all patients detailed clinical history and clinical examination was done. **Results:** Most common type was hepatic seen in 58 (69%) and biliary in 26 (31%). The difference was significant ($P < 0.05$). Common symptoms in hepatic TB was fever (42), weight loss (45), jaundice (32), abdominal pain (52), hepatomegaly (30) and splenomegaly (23). In Biliary TB, symptoms were fever (24), weight loss (6), jaundice (14), abdominal pain (21), hepatomegaly (12) and splenomegaly (10). The difference was significant ($P < 0.05$). **Conclusion:** Authors found that common symptoms of tuberculosis were fever, weight loss, jaundice, abdominal pain, hepatomegaly and splenomegaly.

Key words: Hepatic tuberculosis, Hepatomegaly, Splenomegaly

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INTRODUCTION

The mycobacterium tuberculosis complex (MTBC) comprises nine bacterial species that causes tuberculosis (TB) in mammals such as human beings. Almost one-third of the world's population is infected with TB infection and/or at the risk of TB infection. The term abdominal tuberculosis includes tuberculous infection of the gastrointestinal tract, the mesentery, its nodes, and omentum, the peritoneum, and the solid organs related to the gastrointestinal tract, such as the liver and spleen.¹

Adolescence and early adulthood is increasingly recognised as a key risk period for tuberculosis infection, disease and adverse outcomes.¹ In contrast to young children aged 0–4 years, young people commonly develop infectious forms of tuberculosis and frequently have a much wider range of social contacts outside of the household. Consequently, as well as suffering disease, adolescents and young adults with

tuberculosis contribute to ongoing transmission. In high tuberculosis transmission settings, the incidence of tuberculosis increases rapidly during adolescence to peak in early adulthood.²

Historical data suggest that the risk of infection with Mycobacterium tuberculosis is highest during adolescence and young adulthood, and that between the ages of 12 and 24 years there may also be a transient increase in the risk of progression to disease after infection compared with children or older adults.³ Furthermore, many comorbidities relevant to tuberculosis emerge or are exacerbated during the adolescent period, including infection with HIV, diabetes, risky substance use (including tobacco use) and mental health conditions. Finally, many adolescent girls and young women face the health challenges associated with pregnancy and childbirth, which may increase their risk of both developing tuberculosis and experiencing adverse outcomes.⁴ The present study was

conducted to evaluate the cases of tuberculosis in adults.

MATERIALS & METHODS

This study was conducted in the department of Chest & TB. It comprised of 84 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 positive.

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 were tabulated and subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 84		
Gender	Males	Females
Number	50	34

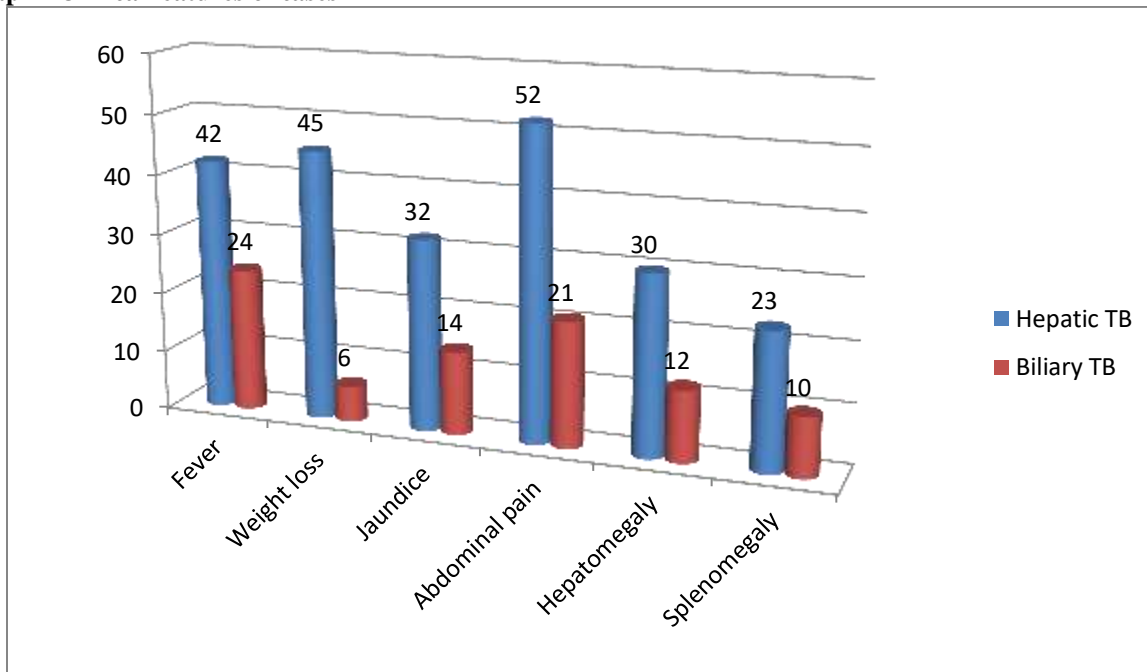
Table I shows that out of 84 patients, males were 50 and females were 34.

Table II Type of Tuberculosis

Type	Number	P value
Hepatic	58 (69%)	0.01
Biliary	26 (31%)	

Table II shows that most common type was hepatic seen in 58 (69%) and biliary in 26 (31%). The difference was significant (P< 0.05).

Graph I Clinical features of cases



Graph I shows that common symptoms in hepatic TB was fever (42), weight loss (45), jaundice (32), abdominal pain (52), hepatomegaly (30) and splenomegaly (23). In Biliary TB, symptoms were fever (24), weight loss (6), jaundice (14), abdominal pain (21), hepatomegaly (12) and splenomegaly (10). The difference was significant (P< 0.05).

Table III Laboratory findings in cases

Parameters	Hepatic	Biliary	P value
Bilirubin (2 XULN)	20	5	0.05
ALT (2 XULN)	35	14	
AST (2 XULN)	42	7	
ALP (2 XULN)	38	12	

Table III shows that bilirubin was 2 fold high in 20 cases of hepatic TB and 5 cases of biliary TB. ALT was 2 fold high in 35 cases of hepatic TB and 14 cases of biliary TB, AST was 2 fold high in 42 cases of hepatic TB and 7 cases of biliary. ALP was 2 fold high in 38 cases of hepatic TB and 12 cases of biliary TB.

DISCUSSION

Adolescents face specific age-related challenges in accessing appropriate care as they transition between child and adult health services, particularly in tuberculosis-endemic settings where dedicated adolescent health services are usually absent. Adolescents and young adults are a recognised key population in the global HIV epidemic and HIV-related deaths are increasing among adolescents, in contrast to falling mortality in every other age groups.⁵

HBTB can mimic liver tumors, hilar tumors causing biliary obstruction, cholangiocarcinoma, periampullary tumors and liver abscesses. Some patients with hepatic TB can present with pyrexia of unknown origin and liver histology shows caseating granulomas (CG). Hepatic TB can mimic other types of granulomatous hepatitis like sarcoidosis. Hepatic biochemical abnormalities and imaging abnormalities can be encountered in abdominal TB without involvement of the liver due to TB. The present study was conducted to evaluate the cases of tuberculosis in adults.⁶

In present study, out of 84 patients, males were 50 and females were 34. Mycobacterium tuberculosis (TB) usually infects the lungs, called pulmonary TB, but can infect almost any organ in the body, causing an extrapulmonary infection.⁷ TB infection of the liver, called hepatic TB, is an extrapulmonary manifestation of an active infection. In 15–20% of active cases, the infection spreads outside the lungs, causing other kinds of TB. These are collectively denoted as "extrapulmonary tuberculosis".⁸

In present study, most common type was hepatic seen in 58 (69%) and biliary in 26 (31%). Common symptoms in hepatic TB were fever (42), weight loss (45), jaundice (32), abdominal pain (52), hepatomegaly (30) and splenomegaly (23). In Biliary TB, symptoms were fever (24), weight loss (6), jaundice (14), abdominal pain (21), hepatomegaly (12) and splenomegaly (10).

In a study by Saber et al⁹, 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.

We observed that bilirubin was 2 fold high in 20 cases of hepatic TB and 5 cases of biliary TB. ALT was 2 fold high in 35 cases of hepatic TB and 14 cases of biliary TB, AST was 2 fold high in 42 cases of hepatic TB and 7 cases of biliary. ALP was 2 fold high in 38 cases of hepatic TB and 12 cases of biliary TB. Chemtob et al¹⁰ found that of 820 new cases, 26.6% had a "satisfactory outcome," 68.5% had a "potentially unsatisfactory outcome" and 4.9% died; compared to 47.4%, 45.6% and 7% among 57 "re-treatment cases" respectively. Using logistic regression analysis, outcome was associated with the district health office.

CONCLUSION

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

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