The Current Status of TB in Children of Bangladesh

Zahangir Alam[1]*, Khondaker Zahirul Hasan[1], A N M Shahidul Islam bhuiyan[2], Md. Nasir Hossain[3]

[1]Junior Consultant (Paediatrics), 250Bed General Hospital, Feni, Bangladesh.
[2]Junior Consultant (Paediatrics), Upazilla Health Complex, Chauddagram Comilla, Bangladesh.
[3]Associate Professor, Department of Paediatrics, Nephrology, Sir Salimullah Medical College, Dhaka, Bangladesh.

ABSTRACT

Objective: In this study our main goal is to evaluate the current status on TB in children of Bangladesh.

Method: This cross-sectional study was conducted at the tertiary hospital in the Institute of Child and Mother Health from Jan 2016 to Jan 2017 among selected 100 children between 1 to 10 years. Data was collected in preformed data collection sheet by interviewing the patient's attendants during the study.

Results: In this experiment (62%) were male and (38%) were female. 6% patients previously diagnosed with TB. Also, 62% had extrapulmonary TB whereas 38% had pulmonary TB.

Conclusion: In this study we found that extra pulmonary tuberculosis was more than PTB. Extra precautionary steps should be taken to control TB among children in Bangladesh; Further study is needed for better outcome.

INTRODUCTION

The World Health Organization (WHO) current estimates in 2015 are that 1 million children currently suffer from Tuberculosis (TB) worldwide (<15 years), and that more than 136,000 die each year. Every day, up to 200 children die from TB though it is a preventable and curable disease. Over half a million children fall ill with TB each year and struggle with treatment.[1,2] In high burden TB countries it has been noted that 15-20% of all TB cases are among children, whereas in low burden TB countries it is estimated that 2-7% of all TB cases are among children.

TB remains a major public health problem in Bangladesh. Although there is no estimate on the prevalence of childhood TB, it is believed that childhood TB is severely under-diagnosed.[3,4]

Childhood tuberculosis carries much higher risk of severe disease and death among young children than adults. The management and prevention of TB among children is relatively neglected despite the fact that TB is a cause of significant childhood mortality and morbidity.[5]

In this study our main goal is to evaluate the current status on TB in children Bangladesh.

OBJECTIVES

General Objective

- To evaluate the current status on TB in children Bangladesh.

Specific Objective

- To identify the socioeconomical characteristics of the patients
- To detect clinical characteristics of the patients

METHODOLOGY

Study Type

This study was a cross-sectional study.

Place and Period of the Study

This was conducted at the tertiary hospital in the Institute of Child and Mother Health from January 2016 to January 2017.

Sampling Method

During the study Purposive sampling method was used.

Sample Size

The study was conducted among 100 children between one to 10 years, attending tertiary hospital and their mothers

Method

Data was collected in preformed data collection sheet by interviewing the patient's attendants.

After obtaining informed consent from the mothers, anthropometric measurements of the children were assessed using standard calibrated instruments. Mothers of selected children were contacted at their residence to collect the information on risk factors. Initial rapport was developed with the

mothers. They were asked to fill up the questionnaire. Information pertaining to risk factors such as childbirth history, clinical characteristics, socioeconomic factors, type of TB on clinical diagnosis etc.

Data Analysis

Statistical analyses of the results were obtained by using window based computer software devised with Statistical Packages for Social Sciences (SPSS-15). Suitable table and figure were used to present observation and result of the study. During analysis frequency distribution for all the variables was worked out and produced in tabular form. After compilation the data were presented in the form of tables. Student's 't' test, Chi-square (x^2) test and correlation- coefficient (r) test were used for determining the difference and relationship. P value <0.05 was taken as minimum level of significance.

RESULTS

In table-1 shows gender distribution of the patients where among 100 patients (62%) were male and (38%) were female.

In table-2 shows age distribution of the patients where (29%) were within1year, (19%) were between 1 to 5 years, (12%) were 6 to10years, (40%) was above 10 years of age.

In figure-1 shows socioeconomical characteristics of the patients where most of the patients belong from poor sociodemographic condition, 71%.

In table-3 shows clinical characteristics of the patients where 6% patients previously diagnosed with TB.

In figure-2 shows types of Tb in patients where 62% had extrapulmonary TB whereas 38% had pulmonary TB.

In figure-3 shows pattern of EPTP in patients where most of the patients had meninges, 29%.
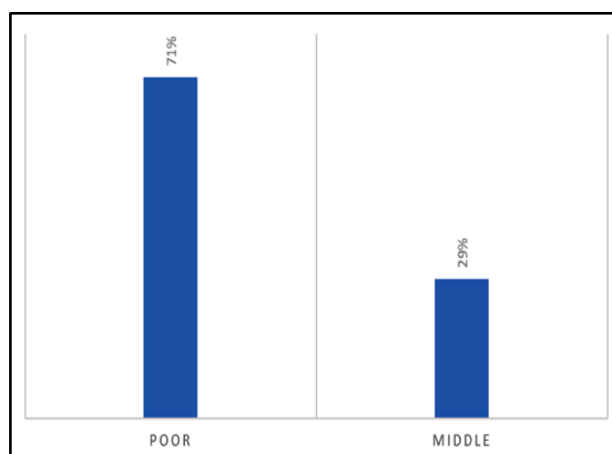
Table 1: Gender distribution of the patients

Gender	%
Male	62%
Female	38%

Table 2: Age distribution of the patients

Age group (years)	%
< 1	29%
1-5	19%
6-10	12%
>10	40%

Table 3: Clinical characteristics of the patients

Clinical characteristics of the patients	%
Previous history of TB	
Present	6%
Absent	94%
Family history of tuberculosis	
Present	20%
Absent	80%
Number of lesions	
Single	70%
Multiple	30%

Figure 1: Socioeconomical characteristics of the patients
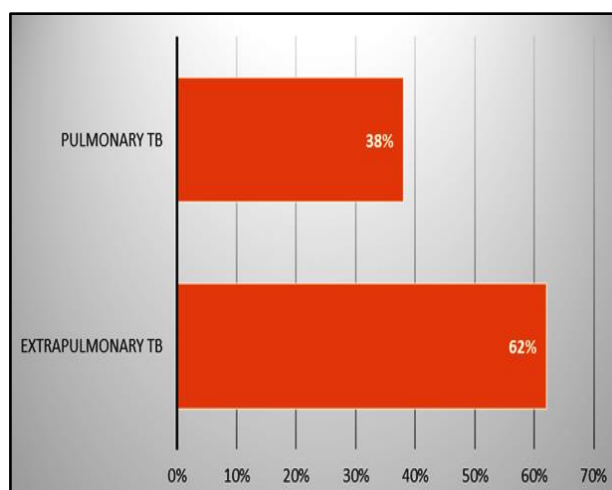
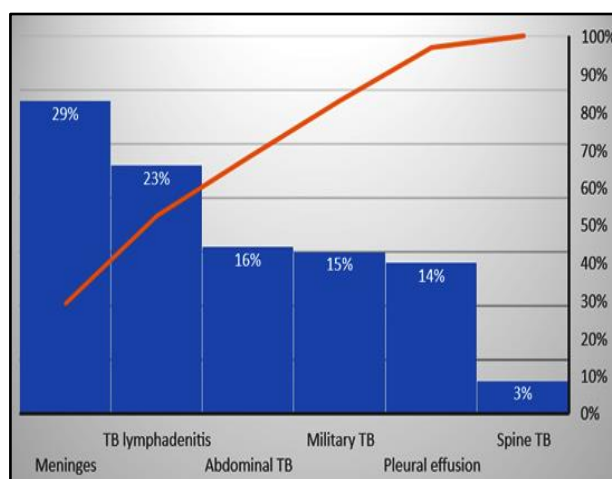**Figure 2: Types of Tb in patients**

Figure-3: Pattern of EPTP in patients

DISCUSSION

In our study a total of 100 patients were included. The most common age group of patients (29%) were within 1 year, (19%) were between 1 to 5 years, (12%) were 6 to 10 years, (40%) was above 10 years of age. Male predominance was seen in TB. Similar epidemiological profile was found in other study done in India.[5] But in the study another study found that, the overall male: female ratio was 1:2; that was also found in several other studies.[6] In our study, 62% had extrapulmonary TB whereas 38% had pulmonary TB. One study showed that young children are more

likely to develop extra-pulmonary TB.[7] A study in Nepal, showed 55% of all TB patients had extra-pulmonary involvement and 10/12 patients of disseminated or miliary TB were younger than 10 years and most of the children who had extra-pulmonary TB were older than 4 years.[8] On the other hand WHO reported in 2014 70-80%of children with TB in their lungs (pulmonary TB) and the rest extra pulmonary TB.[9]

A recent study from China reported the incidence of TB meningitis as 38.8% in TB Infants and young children are more likely than older children and adults to develop life-threatening forms of TB disease and because of their age, pediatric TB acts as a surrogate for identifying recent transmission.[10]

CONCLUSION

In this study we found that extra pulmonary tuberculosis was more than PTB. Extra precautionary steps should be taken to control TB among children in Bangladesh. Further study is needed for better outcome.

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