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Socio-demographic and Clinical profile of Children with Typhoid Fever in a Tertiary Care Hospital

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Introduction with Objective: *The aim of this study was to assess the socio-demographic and clinical profile of children with typhoid fever in Dhaka.* ***Materials and Methods:*** *This observational study was carried out among 120 patients presenting with symptoms, signs and laboratory investigations diagnostic of typhoid fever in IPD and OPD of Paediatric department, Dhaka National Medical College Hospital, Dhaka, from April 2013 to October 2013. Widal test positive was included for the study. Statistical analyses of the results were obtained by using window based computer software devised with Statistical Packages for Social Sciences (SPSS-20.1).* ***Results:*** *Majority of the patients (55%) belonged to 6-8 years. Male patients (n=72, 60%) were more than the female patients (n=48, 40%). Parents education of the study patients was observed that majority parents (n=42, 35%) were HSC level and 41 parents (34.16%) were primary level. Parents occupational status of the study patients was observed that majority (n=42, 35.0%) of the parents were skilled worker. Almost half (46.67%) of the patients drink boiled water. 40% patients used to take food from outside. Good sanitation was found in 61 patients (50.83%).115 patients (95.83%) had fever 5-10 days. Thirty four percents patients had anemia. 85% patients had coated tongue. 59 patients had abdominal tenderness. Palpable liver was found in 85% patients. Palpable spleen was found in 53.33% patients. 72 (60.0%) patients had To 1:160. 103 patients (85.84%) had TH 1:320.* ***Conclusion:*** *Safe water, sanitation and hygiene are critical for preventing the spread of typhoid.*

Keywords: *Socio-demographic and clinical profile, Typhoid fever.*

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Introduction:

Typhoid fever (typhoid or paratyphoid fever) caused by Salmonella serotype Typhi (S Typhi) or Salmonella serotype Paratyphi (S Paratyphi) remains endemic in many areas of the developing world, causing over 26 million infections and over 200,000 deaths annually[1]. The incidence is highest in south-central Asia and South East Asia over 100/100,000 cases/year, with the highest burden of disease in children aged 2-15 years[2,3]. Typhoid fever remains a major public health problem in developing countries. In the developed countries, the incidence is much lower, and most cases are usually from travelers returning from endemic areas[4]. In the succeeding five years, outbreaks occurred in Vietnam, Indonesia, Korea, Chile and Bangladesh. S Typhi represents the commonest cause of bacteraemia in this age group[5,6]. On a global scale, it has been appraised that Salmonella is responsible for an estimated 3 billion human infections each year. The World Health Organization (WHO) has estimated that annually typhoid fever accounts for 21.7 million illnesses (217,000 deaths) and paratyphoid fever accounts for 5.4 million of these cases. Infants, children, and adolescents in south-central and South-eastern Asia experience the greatest burden of illness. In cases of typhyd fever, including infections with S. Typhi and S. Paratyphi A and B, it is often necessary to commence treatment before the results of laboratory sensitivity tests are available (WHO).

Materials & Methods:

This Observational study was carried out on children age belonged

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to 1 – 12 years presenting with symptoms, signs and laboratory investigations diagnostic of typhoid fever in IPD and OPD of Paediatric, Dhaka National Medical College Hospital, Dhaka, Bangladesh during the period from April 2013 to October 2013. The diagnosis of typhoid fever was based on fever for more than 7 days; positive Widal test and exclusion of other febrile illnesses were enrolled in this study. Typhoid fever associated with other diseases were excluded from the study. The collected data were entered into the computer and analyzed by using SPSS (version 20.1) to assess the socio-demographic and clinical profile of children with typhoid fever. The study was approved by the institutional ethical committee.

Results:

Table I shows socio demographic variables of the patients. It was observed that majority of the patients (55%) belonged to 6-8 years. Parents education of the study patients was observed that majority parents (n=42, 35%) were HSC level and 41 parents (34.16%) were primary level. Other results are depicted in the table. Occupational status of the study patients was observed that majority (n=42, 35.0%) of the parents were skilled worker. Almost half (46.67%) of the patients drink boiled water. 40% patients used to take food from outside. Good sanitation was found in 61 patients (50.83%).

Table I: Distribution of the study patients by socio demographic variables (n=120)

Parameter	Number	percentage
Age (in year) Range (2-13 years)		
≤5 years	19	15.84%
6-8 years	66	55%
9-11 years	29	24.17%
>11 years	06	5%
Parents education		
Graduate and above	19	15.83%
HSC	42	35%
SSC	18	15%
Primary	41	34.16%
Occupational status		
Service	13	10.83%
Business	31	25.83%
Skilled worker	42	35%
Unskilled worker	28	23.33%
Unemployed	06	5%
Drink		
Boiled water	56	46.67%
Unboiled water	53	44.16%
Tubewell water	11	9.17%
Used to take food from outside	48	40%
Sanitation Good	61	50.83%

Total numbers of patients both male and female were 120. Male patients (n=72, 60%) were more than the female patients (n=48, 40%) **(Figure 1).**

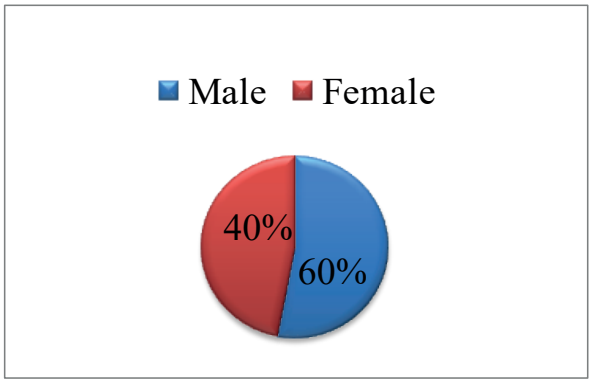

Figure 1: Pie Chart Showing Sex of the Patients (n=120)

Table II shows that, 115 patients (95.83%) had fever 5-10 days. Thirty four percents patients had anemia. 85% patients had coated tongue. 59 patients had abdominal tenderness. Palpable liver was found in 85% patients. Palpable spleen was found in 53.33% patients. 72 (60.0%) patients had To 1:160. 103 patients (85.84%) had TH 1:320.

Table II: Distribution of the study patients by Clinical profile (n=120)

Parameter	Number	percentage
Fever duration		
5-10 days	115	95.83%
11-15 days	05	4.16%
Examination findings		
Anaemia	41	34.16%
Coated tongue	102	85%
Abdominal tenderness	59	49.16%
Liver palpable	102	85%
spleen palpable	64	53.33%
Widal test: TO		
1:160	72	60%
1:320	48	40%
Widal test: TH		
1:160	17	14.17%
1:320	103	85.84%

Discussion:

Typhoid fever may occur at any age, but it is reportedly rate in infancy (Cleary, 2004). In this study majority of the patients (55%) belonged to 6-8 years. This result similar to the findings by the Sinha et al. (1999) and Saha et al. study[7,5]. In this study it was observed that typhoid fever predominant in male subjects. Rokonuzzaman et al. (2011) showed significant number of the patients was male 67.0%, and the rest 33.0% of them were female, which is consistent with the current study[8]. In this present series it was observed that majority of patient brought to the hospital during the 5 – 10 days of illness which is also similar to another study carried out in Bangladesh (Islam, 2003)[9]. In this current study it was observed that 85% patients had coated tongue. This finding is similar to the findings of Lakhotia et al. (2003) study. Abdominal tenderness was found in 49.16% patients, which is

contrast to the findings of Lakhotia et al. (2003) study[10].

Conclusion:

Public health interventions to minimize human carrier contact, improved personal hygienic measures including health care behavior strategies and typhoid vaccination will help to reduce the morbidity and mortality of this global health problem.

Conflict of Interest: None.

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