

RETROSPECTIVE ANALYSIS OF 52 CASES OF ENTERIC FEVER IN A TERTIARY CARE HOSPITAL IN DHAKA CITY

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Abstract:

Enteric fever remains a serious problem in developing countries. School aged children and young adults are mainly the sufferer. *Salmonella typhi* infection results in a clinical syndrome that varies widely in presentation; especially in new antibiotic era. Records of 52 enteric fever cases who were admitted to BSMMU, from July 2007 to June 2008 was reviewed and information was recorded in a prescribed form. Descriptive analysis was done through SPSS. Mean age was 6.7±4 years and male: female ratio was 1.2: 1. Most common presenting features were fever in 100% cases, abdominal pain 40% cases, vomiting 35% and diarrhea, constipation 10% cases. Hepatomegaly was present in 71% and splenomegaly in 52% cases. In our study 32% of children were under 5 years; and the result is similar with some other studies.^{7, 8} Typhoid fever is still a disease which is difficult to diagnose. In some cases of delayed response antibiotic may be required for longer duration where patients became afebrile after 10 days or more from starting antibiotic.

Key words: enteric fever, children, presentation

Introduction:

Enteric fever is an important public health problem in many of the developing countries. Estimates of the global burden of typhoid fever suggest an annual incidence of 12.5 million cases, with three-quarter occurring in Africa and South-East Asia.^{1,2} The incidence of typhoid fever is considered to be low in 1st few years of life, peaking in school age children and young adults and then falling in the middle age.^{2,3} Various organs have been affected in the course of enteric fever; and there is a wide array of presentations varying from nonspecific febrile illness to one of the severe life threatening illness.^{2,4} Emergence of MDR *S typhi* is a concern about response to treatment among treating physician.⁴

Salmonella typhi infection results in a clinical syndrome that varies widely in severity. At onset fever, malaise, flu like symptoms with dull frontal headache are common. The fever is initially low grade, and rises gradually and become high grade and sustained by second week. Often symptoms include poorly localized abdominal pain and dry cough. Physical signs are few – coated tongue, abdominal tenderness, rose spot, relative bradycardia and hepatosplenomegaly.

The epidemic nature of the disease in Bangladesh sufficiently warrants a review of the special features

of the disease in children. If appropriate antibiotic is given fever gradually fall over 3 days. Due to emergence of MDR species and epidemiological aspect this study was conducted to see the presentation, outcome and response to antibiotic of enteric fever cases of BSMMU.

Materials and methods:

We reviewed all patients of Paediatric medicine unit 1 of BSMMU who were admitted over the period from July 2007 to June 2009. BSMMU is a referral hospital in Dhaka city where typhoid fever is endemic.⁵ In this ward children aged 1 month to 15 years were admitted. And cases were selected with strong clinical suspicion of enteric fever – like high continued fever for 7 days or more, along with one or more clinical features suggestive of enteric fever – like abdominal pain, vomiting, constipation, loose motion, abdominal distension, tenderness and hepatosplenomegaly. Other febrile illness was excluded. Patients were investigated to confirm the diagnosis and exclude other diagnosis and for any complications. Investigations were CBC, Widal test, blood culture & sensitivity, ALT, S bilirubin. Final diagnosis was considered with suggestive clinical features and positive Widal test or positive blood culture. All patients were treated with injectable antibiotics and

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followed up regularly. Antibiotic were continued up to 5 days after patient became afebrile. Patients were discharged after complete antibiotic course and followed up 2 week after discharge.

Results:

Records of A total 52 cases of typhoid fever were analyzed. Mean age was 6.7 ± 4 years. And male: female ratio was 1.2: 1. Most common presenting features were fever 100% cases, abdominal pain 40% cases, vomiting 35% and constipation 10%cases. About physical findings 71% had hepatomegaly and 52% had splenomegaly.

Table-I
Symptoms and signs of patients at presentation

Symptoms Features	(%) of patients	Signs Features	(%) of patients
Fever	100	Abdominal distention	19
Abdominal pain	40	Abdominal Tenderness	39
Vomiting	35	Hepatomegaly	71
Diarrhoea	19	Splenomegaly	52
Constipation	10	Rose spot	2
Cough	8		

Table-II
Laboratory investigations

Findings	% of patients
Anemia	36
Widal Test positive	69
Blood culture positive	17

All patients received injection ceftriaxone and resolution of fever showed a wide range of 1 – 15 days with mean 6.5 days. During this study period no death occurred due to typhoid fever.

Discussion:

Salmonella typhi infection remains a serious problem in developing countries and a major cause of mortality and morbidity. In our study 32% of children were under 5 years; and the result is similar with some other studies.^{7, 8} In our series diarrhoea was predominant gastrointestinal symptoms than constipation, and in accordance with other studies.^{8, 9} Typhoid is still difficult to diagnose, particularly in infant, Matheu et al reported 10 patient in their series presenting with mild illness like fever and cough.¹⁰ In our study 8% children presented with fever and cough.

In a study febrile convulsion was presenting symptom in 20% of the patients.² In our study none of the patient presented with seizure. In our study hepatomegaly was higher than splenomegaly (71% vs. 52%), which is accordance with other studies.^{2, 11} Ohel and Latitan reported that, in their series hepatomegaly was almost twice as frequent as splenomegaly.^{8, 12} In another study in Turkey, Kanra et al found 17% encephalopathy, 73% hepatitis, 4% pneumonia, 4% gastrointestinal bleeding; but we did not find similar features. Some of our children required antibiotics for longer duration even up to 23 days. In case of delayed responders, we did not change the antibiotics when the patients were seen to be stable i.e. not deteriorating clinically and also isolates were found to be sensitive to the given antibiotic. No fatal outcome occurred in this series.

Conclusion:

Enteric fever is variable in presentation, none of the investigations is conclusive; sensitivity of widal test is slight higher but specificity is low and both sensitivity and specificity of blood culture are low. So Knowledge of variable presentations could help in diagnosis. It appears that in case of appropriate antibiotic we can wait safely for a longer period; here we waited up to 15 days for convalescence and no harm occurred. Rather frequent change of antibiotics may linger the illness and may lead to antibiotic resistance.

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