TROPICAL FEVER BURDEN AT A TERTIARY CARE HOSPITAL OF A DEVELOPING COUNTRY: CLINICAL PROFILE AND COMPLICATIONS

D. Bhat*, G. Dhooria, S. Kakkar

Department of Pediatrics, Dayanand Medical College & Hospital, Ludhiana, India

*Corresponding author: deepak14@gmail.com

BACKGROUND

Infectious illnesses affect all age groups, particularly plaguing those living in tropical regions. Febrile infections that are prevalent in or unique to tropical and subtropical regions are collectively known as tropical fevers. They are caused by a number of viruses, bacteria, and protozoa and often get transmitted by an insect bite. Dengue, malaria, leptospirosis, influenza A, Typhoid, rickettsiosis including scrub typhus, Japanese encephalitis (JE), and chikungunya were some of the common tropical fevers reported in patients from Asian countries. Some of these occur throughout the year and some especially in rainy and post-rainy season. Major Concern about them is, high prevalence and morbidity and mortality caused by these infections, and overlapping clinical presentations, difficulties in arriving at specific diagnosis and need for early empiric treatment

METHODS

This was a prospective observational study conducted during the post monsoon season from September 2017 to November 2017 in the Department of Pediatrics, Dayanand Medical College and Hospital, Ludhiana, Punjab, India. All the children till the age of 17 years who came to the emergency with complaints of fever and who were provisionally diagnosed as cases of tropical fever were taken into the study.

RESULTS

- There were a total of 253 children with a provisional diagnosis of tropical fever. Most children were between age of 10-18 years (54.94%), with the youngest being 4 month old (Fig. 1).
- Besides fever other common symptoms were pain abdomen (52.96%), vomiting (61.66%), loose stools (9.09%), bleeding (10.28%), rash (7.5%), itching (19.3%), and neurological symptoms (10.67%). Other signs were pallor (35.9%), skin hue (34.3%), prolonged capillary refill time (27.6%), cold extremities (8.6%), hepatomegaly (35.5%), ascites (14.2%), splenomegaly (7.5%) and hypotension (32.3%) (Table 1).
- Among various complications were Low platelet count (69.1%), leucopenia (36.36%), raised hematocrit (35.9%) (Table 2, 3).
- Of all patients, 167 (66.01%) were diagnosed as dengue fever, 23 (9.709) typhoid fever, 16 (6.32%) scrub typhus, 2 (0.79%) hepatitis A, 2 (0.79%) leptospirosis and 32 (12.65%) unclassified fever (Fig. 2).
- Overall mortality rate was 3.9% (Fig. 3).

Fig. 1: Age wise distribution (N=253)

Table 1: Sign and Symptoms (N=253)

Clinical features	Number	Percentage
Fever	205	81.03
Pain abdomen	134	52.96
Vomitings	156	61.66
Diarrhea	23	9.09
Bleeding	26	10.28
Neurological involvement	27	10.67
Renal involvement	17	6.72

Table 2: Laboratory data (pathology)

Parameter	Number	Percentage
Leukocytosis	63	24.90
Leucopenia	92	36.36
Neutropenia	92	36.36
Neutrophilia	43	17.00
Lymphocytosis	80	31.62
Severe thrombocytopenia	38	15.02
Moderate thrombocytopenia	82	32.41

Table 3: Laboratory data (biochemical)

parameter	Number	Percentage
Raised ALT	149	58.89
Raised AST	173	68.38
Raised creatinine	8	3.16
Hypernatremia	17	6.72
Hyponatremia	45	17.79
Hyperkalemia	57	22.53
Hypokalemia	13	5.14

Fig. 2: Etiological profile (N=253)

Fig. 3: Outcome (N=253)

CONCLUSIONS

Tropical fevers contribute a significant disease burden in children of developing countries. A practical approach is to group the symptoms and signs in a syndromic fashion so as to enable the clinician to have a plan to treat such patients.