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Abstract

Study of Tropical Fever in Indian ICUs

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Back ground

Every year ICUs in India face a serious annual challenge with cluster cases of a syndrome comprising of Fever, Thrombocytopenia, one or MOFS during the months from July to November. Most of these patients suffered from one or more than one Tropical infections like Dengue Fever, Scrub Typhus, Malaria, Leptospirosis, Typhoid Fever or rarely Meningococemia. The clinical picture of each patient was so overlapping that firm clinical diagnosis of one etiology was challenging. *seizures tonic and clonic altered sensorium, deep acidotic breathing, SPO2 82% on High flow mask, Platelet count 32000, Hb 9gm% Bilateral lung infiltrates and anuria last 4 hrs. Has petechial rashes scattered over different parts of body*

Obectives of the study were to understand

- Trends of tropical infections in different ICUs in India
- Common clinical presentations
- Rapid diagnostic procedures
- Treatments offered – specific / supportive
- Outcome

Material and Methods

34 ICUs from all parts of India participated in the study. This was a prospective observational study. A software was developed and data obtained from all participating ICUs during the period between July to December 2015. Data was entered by the participating ICUs at their end and data analyzed by our team.

Observations

A total number of 337 patients were recorded and their data analyzed. 209 (63%) were adult patients and 118 (37%) were pediatric patients. Peak 98 (33%) patients was observed during the months of

October . 56% were males 44% females .Rural population constituted 65% and urban about 35%.Mean Apache score in adults was 18.5 and Mean Prism score in children 17.8

Thrombocytopenia/rash was the most common presentation (60%) followed by respiratory distress (46%), encephalopathy (28.5%), renal failure (23.5%), jaundice (20%), and multiorgan failure (19%). The clinical presentations were almost similar in both adults or pediatric age groups and either sex . However , renal failure was mostly seen in adults (more than 33%) to less than 5% in children .An etiology could be established in 365 (80.5%) cases. Dengue ($n = 105.23\%$) was the most common followed by scrub typhus ($n = 83.18\%$), encephalitis/meningitis ($n = 44.9.6\%$), malaria ($n = 37.8\%$), and bacterial sepsis ($n = 32.7\%$).

Nearly, half (35% invasive; 12% noninvasive) received mechanical ventilation, a quarter (23.4%) required vasoactive therapy in first 24 hours and 9% . mostly adults received renal replacement therapy .Ceftriaxone , Azithromycin and Doxycycline were the most used antibiotics and Artesunate was the most common Antimalarial used .

ICU and hospital length of stay were 4 (3–7) and 7 (5–11.3) days respectively . At 28 days, 76.2% survived without disability, 4.4% had some disability, and 18.4% died. Mortality was higher (27% vs. 15%) in patients with undiagnosed etiology ($P < 0.01$).

On multivariate analysis, Multiorgan dysfunction syndrome at admission on day 1 Sequential Organ Failure Assessment score , and the need for invasive ventilation were independent predictors of unfavorable outcome.

Conclusions: Dengue, scrub typhus, encephalitis, and malaria are the major tropical fevers in Indian ICUs. Their clinical presentation , periods of presentations so overlapping that a clinical diagnosis is difficult at the time of arrival of the patient . The data support a syndromic approach, point of care tests, and empiric antimicrobial therapy recommended by Indian Society of Critical Care Medicine in 2014.

Declarations

I have previewed the abstract and all information provided is correct .I accept that no correction or revision can be made after submission and final publication will be as I have submitted .

Submission of abstract includes my consent to publication of the abstract by the organizers

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(Dr Narendra Rungta)

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