LETTER TO EDITOR (VIEWERS CHOICE)

FLUID REPLACEMENT IN CHILDREN WITH DENGUE AND FACTORS ASSOCIATED WITH PULMONARY EDEMA: A LETTER TO EDITOR

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To

The Editor,

We read the article by Shah et al with great interest and would like to commend the authors for their excellent work. (1) It highlights important aspects of dengue hemorrhagic fever (DHF) and dengue shock syndrome (DSS) and helps in better understanding of fluid management and the factors associated with the fluid overload state. However, there are certain things clarification of which will benefit readers of this journal.

1. The definition used for defining DHF and DSS is not given under methodology section. The pre-defined standard case definition will help in better understanding as well as it will improve the external validity of the study.
2. The median time of appearance of dengue Ig M antibodies is 5 days; so inclusion based upon antibodies alone is likely to miss lots of cases in the initial few days. (2) Other rapid assays like NS1 Antigen should be used in conjugation to improve the diagnostic yield. Also; it is not very clear that detection of antibodies was done by commercial Rapid Diagnostic Test (RDT) or routine laboratory. As in the initial 5 days sensitivity and specificity vary a lot. WHO recommends against the use of these commercial kits in the clinical settings to guide management of DSS/DHF cases because reliance on such tests to guide clinical management can result in an increase in the case fatality rate. (3)
3. In results most of the values are showing skewed distribution still they are presented in the form of mean and standard deviation. Median will be a better measure for a skewed distribution. (4) It has important implications in calculating p value. For skewed distribution Mann Whitney U test will be used instead of student t test. Hence, p value might change altogether.
4. As per our national guidelines (2) thrombocytopenia (< 1,00,000 per cubic mm) is an essential criteria for diagnosis of DHF/DSS, but in the index study mean platelet is more than 1,00,00 per cubic mm. How to explain this?
5. Our national guidelines recommends fluid rate of 6 ml/kg/hr for 1-2 hours for DHF grades I and II and then titrate the rate depending upon response. (2) In present study it was 4 ml/kg/hr. What was the rationale for this?

This study is unique and first of its kind. I am sure clarification of the above points will help in improving external validity as well as clinical application of the study.

Funding: None
Conflict of Interest: None

References :

1. Dey A, Dhabe H, Shah I. Fluid Replacement In Children With Dengue And Factors Associated With Pulmonary Edema. Pediatr Oncall J 2017; 14 (2): 31-34.
2. Guidelines for Clinical Management of Dengue Fever, Dengue Hemorrhagic Fever and Dengue Shock Syndrome. Accessed on July 9, 2017 from: http://www.nvbdcp.gov.in/Doc/Clinical%20Guidelines.pdf
3. Suchitra Nimmannitya: Clinical Manifestations of DF/DHF - WHO Regional Publication No. 22, Monograph on Dengue/DHF, pp 48-54, WHO/SEARO, New Delhi.
4. Manikandan S. Measures of central tendency: Median and mode. Journal of Pharmacology & Pharmacotherapeutics. 2011;2(3):214-215.

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DOI : 10.7199/ped.oncall.2017.50