

Adherence to the fluid quota in DHF management and risk of fluid overload

Madanayake P.M.W.¹, Prasath T.¹, Pushpakumara J.¹, Jayawardena A.E.U², Gunatilake S.B.², Wanigasuriya J.K.P.²

1. Colombo South Teaching Hospital, 2. Department of Medicine, Faculty of Medical Sciences, University of Sri Jayewardenapura

Objectives

Management of critical phase of dengue haemorrhagic fever (DHF) is based on meticulous fluid therapy using the calculated fluid quota of maintenance plus 5% deficit, according to the national guidelines. However, difficulties in limiting the fluid therapy to the calculated quota are often experienced in clinical practice. Our aim was to evaluate the adherence to the calculated fluid quota, and to assess the risk of fluid overload when it is exceeded.

Method

Prospective observational study was conducted in University medical unit of Colombo South Teaching Hospital using 100 consecutive patients who got admitted with clinical diagnosis of dengue fever who went into critical phase after admission. Patients were later examined for facial puffiness, pulmonary oedema, tense ascites and large pleural effusions as evidence of fluid overload.

Results

Mean age was 30.3 years. 60 (60%) were males. One (1%) developed dengue shock syndrome (DSS) and 24(24%) developed compensated shock with narrow pulse pressure. 69(69%) patients needed more than the allocated fluid quota. This included the patient with DSS, all those with compensated shock and 46 out of 75(61%) patients who maintained their blood pressure. Evidence of fluid overload was observed in 11(11%) patients and all of them had exceeded the fluid quota. Majority of those who had fluid overload (10/11) had received fluid more than maintenance plus 7.5% deficit.

Conclusion

Adherence to the recommended fluid quota was found to be difficult in clinical practice as majority of DHF patients needed more fluid during critical phase. Those who receive fluid above maintenance plus 7.5% were at a high risk of developing fluid overload.