Reviewer’s report

**Title:** Crystalloid or colloid boluses for the management of dengue shock syndrome in the presence of ascites and pleural effusions?

**Version:** 2  **Date:** 31 October 2010

**Reviewer:** siripen kalayanarooj

**Reviewer’s report:**

- **Background** – the author had used the references 3, 4 and 5 as the recommendation for IV fluid therapy in DSS patients. In fact reference 3 and 4 more or less the same recommendation but reference 5 recommend a larger amount of IV fluid which is dramatically different from the previous WHO guidelines.

- **Case 1** – The patient received 2.5 L of IV fluid before critical period. WHO guidelines do not recommend IV fluid during the febrile phase except only those who have moderate to severe dehydration and cannot have oral intake. This patient had 1.5 L of oral intake so this patient's treatment was not following the WHO guidelines. Also she developed profound shock: absence of peripheral pulse with increasing PCV from 42.3 to 55% (about 30% hemoconcentration) and no investigation and correction of possible abnormalities in metabolic (hypoglycemia), acid-base (acidosis) and electrolyte balance (hypocalcemia) so that she did not improve very well with only IV fluid and this may lead to more volume is needed for her. Although she did not have frank clinical bleeding, she might have concealed bleeding which is more common.

- **Case 2** – This woman also had profound shock on arrival to the hospital and no metabolic, acid-base and electrolyte investigation and correction were done so she needed more volume for resuscitation. The total volume of fluid resuscitation was 3,150 ml in 3 hrs, which was too much and this might cause acute pulmonary congestion and/or heart failure. This too much volume are not in the WHO recommendation. If the patient does not response to the 1-2 bolus of IV fluid, the clinician should investigate the laboratory abnormalities at least repeated the PCV and if it is dropping, blood transfusion is indicated. The treatment of this patient also not follow the WHO guidelines.

- **Case 3** – The treatment of this patient seemed to be OK during initial resuscitation. But at 24 hour after shock, she developed profound shock and at this time enormous amount of IV was given to resuscitate her, i.e. 3,250 ml in 3 hours! This is not the WHO recommendation. About 24 hours after the first shock, the plasma leakage is minimal and IV fluid should be tapered. If she developed shock, only small bolus is recommended and then stop quickly. Probably the shock at this stage might be due to volume overload and diuretic might be indicated at this time? (There was no detail of her intake and output at this time to help differentiate the cause of shock at this time).

- **Conclusion** – the authors did not follow exactly the WHO (only reference 3 and
4) recommendation for IV fluid management so they cannot conclude that when they follow the WHO guidelines and the patients develop complications.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'