Reviewer's report

**Title:** Severity of acute hepatitis and its outcome in patients with dengue fever in a tertiary care hospital Karachi, Pakistan (South Asia): An Analytic cross sectional study.

**Version:** 1 **Date:** 12 July 2009

**Reviewer:** Mei-Chuan Kuo

**Reviewer's report:**

1. This is a second largest study to discuss about the liver function test in Dengue fever. The sample size is enough. They also discuss the outcome and length of staying; this is a good point in this paper. However, they put DF and DHF together for analysis is not good. They should divide all these patients into DF and DHF 2 group for calculation and discussion. Because DHF have worse outcome and longer LOS, and higher probability of abnormal liver function tests and it is well know (such as, table 4 in Clin J Am Soc Nephrol. 2008; Sep;3(5):1350-6; table 2 in Am. J. Trop. Med. Hyg., 78(3), 2008, pp. 370–374)

2. For discussion, the author can explain more about the abnormality of AST and ALT, especially the pathogenesis. (Diagn Mol Pathol 2006;15:223–228; Transactions of the Royal Society of Tropical Medicine and Hygiene (2006) 100, 608—614)

**Background :**

1. 2nd line : DIC, no mention about its abbreviation

2. Mean ALT was 194.87 +351.93; 72 %( 496) had mild to moderate hepatitis, 15 %( 103) had severe hepatitis. Mean AST was 436.76 + 987, Mean T.Bil was 1.52 + 2.59, Mean GGT was 149.65+ 161.44 and ALK.Phos112.47 + 96. Mean length of stay (LOS) in patients with mild/moderate hepatitis was 3.63 days v4.3 days in those with severe hepatitis (P value 0.002). Mortality was 1.2 % (6) in mild/moderatehepatitis v 11.7% (12) in severe hepatitis group (p value <0.001). Complications between mild/moderate and Severe hepatitis were; Bleeding 0.6% v 7% (P value < 0.001), Acute Renal failure (ARF) 1.6% v 8% (P value 0.002), Acalculus cholecystitis 2.8% v 7% (P value 0.04) and encephalopathy 2% v 7% (P value 0.02), Shock 1.2% v 2% (p value0.4). no measurement units, v should change to v.s.

**Introduction:**

1. 1st line not only Aedes ageptyi but also Aedes albopictus

2. “mortality rate of 25000 per year.” Is this total mortality cases in the world?

3. “none of the studies have reported about the severity of liver involvement in Dengue fever”--it should have papers, like you have mentioned in the text.

----delete this sentence
Material and method
1. Not necessary to introduce this hospital so detailed.
Suggest delete” AKUH is the first hospital in Pakistan and among the first few teaching hospitals in the world to be awarded the prestigious Joint Commission International Accreditation (JCIA) for practicing the highest internationally recognized quality standards in health care. Similarly, the Hospital also holds ISO 9001: 2000 certification for practicing consistent international standards of quality services.”
2. 2nd paragraph, line 3: Why “ALT 23-300 IU/L, Severe Acute hepatitis: ALT > 300 IU/L (ref 11 can’t be found, need more reference to define severe hepatitis)
3. Page 5, Line 7, definition of ARF (defined as rise of creatinine >3 times of normal). But according to RIFLE criteria, it should be rise > 3 times of baseline, not normal)

Result:
1. Page 5, line 27: 38.5##1, please change to 38.5#1#
2. Page 6, 5th line; mean hematocrit of “40.07 + 6.8,”; Should add %
3. Page 6, 10th line; Among the complications, we have found 1.7% (12) bleeding, 1.3% (9) shock, 2.7% (20) Acute renal insufficiency, 3.9% (27) acalculus cholecystitis and 2.9% (20) Encephalopathy---for the case number, they will be confused with ref number. Please change it to n=....

Discussion
Page 7, line 4, “The reasons for higher ALT/AST levels in our population are either due to more virulent strain of dengue infection or virus is more hepatotoxic.” But which type of dengue virus is not mentioned. Please make sure which type in this outbreak.

Figures and Tables
There are no labels(X, Y) for these 2 figures
For Figure 1, it will be better to do it by using survival analysis
There is not necessary for table 1. (You can only describe them in the text)

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests