Reviewer's report

Title: Artificial liver support for acute liver failure: improvement of hepatic encephalopathy treated by on-line hemodiafiltration: a case series study

Version: 1 Date: 2 December 2009

Reviewer: Vanessa Stadlbauer

Reviewer's report:

This paper is well written and shows interesting data on the use of on-line HDF in acute liver failure.

However, in my opinion, some questions need to be addressed before this article can be published.

Major Compulsory Revisions

1) Title: Calling on-line HDF artificial liver support is in my view a little bit far fetched. I would suggest calling the paper: Treatment of hepatic encephalopathy by on-line hemodiafiltration: A case series study

2) Methods: The criteria for choosing patients for this study are not completely clear. You describe that 8 patients were excluded from analysis. Why did you exclude these patients? I would suggest to also describe these patients in the study.

3) It is unclear what happened to case 6 – how could the patient withdraw consent when he developed progressive brain edema? Please describe in more detail.

4) It would be interesting to see more data on the changes in biochemical measurements such as bilirubin and ammonia.

5) It would be interesting to know whether there were any differences between patients who died and those who survived concerning biochemical measurements. You could also look at the changes in e.g. bilirubin or ammonia in these two groups. If you could also take the 8 patients that were excluded from the study and compare these data, it would give more weight to your hypothesis that on-line HDF improves HE.

6) I do not understand why you describe 2 patients in more detail. I don’t think that these case reports are necessary. Providing more data on the whole patient group would be more interesting (see above)

7) Some key papers in this field are missing in your reference list, such as


8) Please speak to a statistician if the student-t test is the correct test to use (do your data pass normality testing?) And the spearman rank correlation coefficient is used to quantify the relationship between two independent variables (correlation) and not to compare paired sets of data.

**Level of interest:** An article whose findings are important to those with closely related research interests

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

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests