Reviewer's report

Title: Blood ammonia levels in liver cirrhosis: a clue for the presence of esophageal varices.

Version: 1 Date: 29 December 2008

Reviewer: Roberto de Franchis

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Major compulsory revisions

This study evaluates the suitability of measuring blood ammonia levels as a marker of the presence of esophageal varices.

The issue of identifying patients with esophageal varices at risk of bleeding by non invasive means is relevant and has been addressed in several recent studies. This is yet another attempt to tackle this goal.

The Authors deserve to be commended for their thorough statistical analysis, but the bottom line is that the performance of the measurement of blood ammonia for the identification of patients with varices is simply not good enough for this test to be proposed as a suitable alternative to upper GI endoscopy

Major points

a. In the results, there seems to be a contradiction concerning the relationship between spleen longitudinal diameter (SLD) and variceal grade. In the second paragraph on page 7 the Authors say that “splenomegaly, assessed as SLD at US, was present in 50 patients... and evidenced no relation to the grades of EV”. In the second line of the “Associations” paragraph, they state that “A significant correlation was evidenced between SLD values and EV grades”. Please explain.

b. The Authors should calculate how many patients could have avoided undergoing EGD if the cut-off of 42 microMoles/liter had been used for selection, and how many patients with varices would have been missed if this threshold had been used.

c. The discussion is out of focus and should be totally rewritten, in that it discusses pathophysiological aspects which are largely unrelated to the aim of the study, and totally fails to put the value of measuring blood ammonia in the context of other non invasive methods to detect the presence of varices.

Minor essential revisions

a. The English form is awkward at some points and needs revision by a native English speaker; spelling mistakes should also be corrected

b. Ascites was detected in 35 of 61 decompensated patients: in general, the appearance of ascites is considered the hallmark of decompensation: how was decompensation diagnosed in non-ascitic patients?

c. The numbering of the tables jumps from 3 to 5
d. The figures are reported twice

**Level of interest:** An article of limited interest

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

**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