

Reviewer's report

Title: Enteral nutrition in the critically ill child with shock: a prospective observational study

Version: 1 **Date:** 10 December 2007

Reviewer: Mette M Berger

Reviewer's report:

Major Compulsory Revisions

1. Is the question posed by the authors new and well defined?

Yes

Prospective study including 55 patients with shock (21 d - 22 years) comparing nutritional support in shock with that of 461 non shocked ICU patients. Among shock patients 75% patients were on total EN, always postpyloric. 31% presented variable degrees of gastrointestinal complications, one being lethal. This complication rate is high, and the authors very correctly draw attention to this issue in their conclusion. This study is important as prospective large size studies remain few in the paediatric population.

There are some shortcomings, which are partly related to the characteristics of pediatric ICUs: the patient population is very heterogeneous - some patients are nearly newborn (21 d) while others should be qualified adults (22 years). Comparing feeding and gastrointestinal tolerance in such extremes of age is difficult, as the energy requirements/kg are highly dependent on age - this partly explains why energy delivery was lower in the shocked patients whose mean age was significantly higher.

2. Are the methods appropriate and well described, and are sufficient details provided to replicate the work?

insufficient

Page 5: the systematic postpyloric access placement is a paediatric particularity - it may have indirectly contributed to the high rate of complications. Indeed it is easy to force-feed in this pp position, which might prompt more problems in case of gut ischemia, by making it more difficult to detect.

Page 5: energy: As the patient population is heterogeneous by age, it would be important to stratify by age category, and to compare the energy delivery with the energy target - this would strongly improve the validity of the results.

3. Are the data sound and well controlled?

Partly yes.

Table 2: The characteristics of the shocked patients certainly do not have a normal distribution: provide data as medians and ranges. P values of <0.000 are either to be deleted, or completed if they show highly

significant numbers (same in table 3).

The data are difficult to understand: are the drug rates a mean value of the entire stay?, or of the shock period. To ease reading, provide a foot note explaining the units, and saying they are means \pm sd and delete it from the variable column.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?

Atypical descriptive paper -no major issue

5. Are the discussion and conclusions well balanced and adequately supported by the data?

Partly yes

Page 11, last 2 lines: this statement is probably based on the observation of stools which possibly appeared normal? Nevertheless this observation is by definition not a measure -and it does not enable assuming the efficacy of absorption.

Page 12: it is difficult from your data to conclude that it is effective rather state that you were able to achieve energy target if this was the case (see comment on methods)

Page 10, line 16: ... renal and mortality: do you mean renal failure?

6. Do the title and abstract accurately convey what has been found?

Title yes

abstract : There are no efficacy data in the paper this word should therefore be deleted from the aims. Please state that the shocked patients are compared to a non shocked population.

7. Is the writing acceptable?

There are many orthographic and grammatical errors disseminated throughout the paper - please ask an English speaking person to help you with the final version.

What next?: Accept after minor essential revisions

Level of interest: An article of importance in its field

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.