

Reviewer's report

Title: Anthropometric, biochemical and clinical assessment of malnutrition in Malaysian patients with advanced cirrhosis

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Reviewer: Manuela Merli

Reviewer's report:

The present study examines a group of Malaysian decompensated cirrhotic patients. The patients were 36 with a prevalent post-viral (41%) and post-alcoholic (33%) origin of liver disease. Malnutrition was assessed by using different methods. Some of these showed low sensitivity. The authors conclude, based on SGA and MAMC that malnutrition is frequent in their population with no significant difference between alcoholic and non alcoholic patients.

Main comments

This study has the advantage to report data which are lacking in the literature: degree of malnutrition in an Asian population of cirrhotic patients. At the same time the study has many problems which need to be solved to ameliorate the meaning of the results presented :

Major comments

- 1) the authors claim that in Asia the number of people developing cirrhosis is large however the number of patients enrolled in this study is rather small and this is an important limitation for the relevance of the results. It is unclear if exclusion criteria were utilized for the selection of patients as, formally, inclusion and exclusion criteria were not reported
- 2) information about how many patients presented an active alcohol intake is lacking
- 3) in section Methods it would be better to include a definition of the criteria used in the study for the diagnosis of malnutrition. Some times the authors have used anthropometry (< 5th or < 25th percentile MAC or MAMC) and some times SGA with different results
- 4) The authors made no attempt to define the patients dry weight which can be estimated after total Paracentesis has been performed. As 41.7% of patients had ascites at admission considering a wrong body weight caused an overestimation of BMI but also an underestimation of the calorie intake expressed as Kcal/kg. This pitfall was not considered.
- 5) The authors failed to consider the gender difference of anthropometric parameters therefore the mean values reported in Tables for TST, MAC, MAMC are often meaningful. 1/3 of patients were females and females are known to have higher fat mass and lower muscle mass vs males. The proposed normal

range/expected values shown in Table 2 for MAC, TST, and MAMC are those for males or females? Normal referenced values should be different for males and females. To avoid the creation of further sub groups (Child Pugh B or C, males or females...) I suggest the authors to present the results as % of those below the cut off (< 5th percentile).

6) It is unclear if the dietary interview is referred to the home diet or to the in-hospital diet. The protein content of the diet is not reported.

Minor comments: there are many imprecision :

1) bio-impedance evaluation is cited in the abstract but is not reported in the results

2) prealbumin is cited in methods but is not reported in the Results

3) In section Methods the authors should only describe the methods which were utilized in the study. Other considerations (see all the paragraph regarding biochemical parameters) should be preferably be moved in the Discussion.

4) I suggest to utilize MAMC as measure of muscle protein mass instead of MAC. In fact MAC includes both fat and muscle while MAMC is calculated by subtracting fat to MAC (pag 7 : Anthropometry)

5) low albumin levels in liver cirrhosis are mainly influenced by the failure in liver capacity of protein synthesis. (this is evident in Table 3) but the authors seem to be always concerned about "inflammation" . The mechanism of reduced protein synthesis needs to be reported.

6) Results: I suggest to change as "reason for admission was tense ascites with need of paracentesis"

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, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

'I declare that I have no competing interests'