Reviewer's report

Title: Malnutrition and inflammation in acute kidney injury due to earthquake-related crush syndrome

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Reviewer: Douglas M Silverstein

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GENERAL COMMENTS

The manuscript by Gui-Sen Li et al describes nutritional and inflammatory status in patients who develop CS with/without AKI. This is an important subject that is worthy of investigation. However, the study design and presentation contain significant flaws that need to be addressed.

MAJOR COMPULSORY REVISIONS

1) Perhaps this is my confusion but the study groups seem to vary by numbers and categories throughout the paper. In general, the authors need to review all the text and tables and make sure that the numbers/categories are consistently presented. Without this, it is very hard for anyone to read this study and/or make a definitive conclusion from the data. For example:
   a. In the Methods section, the authors outline the three groups as A, B and C. However, this designation is not shown in any table.
   b. The categories do not always match. For example, Group B is referred to as CS without AKI, but in Results (Table 1), this group is described as AKI-non RRT.
   c. The numbers in each category also do not always match. There seem to be 82 patients with CS, of whom, 57 had AKI but did not require RRT and 25 who had AKI and did require RRT. If that is right, what do the numbers in Table 2 (26 without CS and 56 with CS) refer to?
   d. I am unclear which group of patients is being studied in Table 3. Why are there only 18 patients? Regardless of whether they had CS and/or AKI and/or required RR, the patient number seems small. Who are the 18 controls? How were they selected?

2) It is not clear in the Methods section at which time period the hemodynamic parameters (e.g. BP) and serological studies were done. This need not be clearly stated.

3) The authors correctly state that there are various definition of AKI. The authors need to clearly state which definition they used.

4) Table 1 shows clinical and lab parameters for controls and patients with CS
and Aki +/- RRT. Aside from my confusion regarding these categories (see comment 1 above), I am concerned about one conclusion drawn by the investigators pertaining to protein levels. Its is stated in the Results section (Page 8, Paragraph 2, Lines 1-2) that TP and albumin levels were lower in patients with CS and lower still in patients with CS requiring RRT. Although it is clear in Table 1 that compared to controls, those with CS + RRT had lower TP and albumin levels, it is not clear that those with CS without RRT had lower protein levels. The Discussion (Page 11, Paragraph 1, Lines 4-5) states that TP and albumin levels “decreased significantly in CS participants without RRT”. Please provide p values and clarify the text.

5) The authors show in Table 4 that blood products and albumin were given to patients with AKI. This data is very limited. As the authors state, malnutrition in AKI with RRT is an established entity-what kind of general nutritional support aside from albumin infusions was given to patients with AKI with/without RRT? If it was given, when, and in what time relation to the time the TP and albumin were measured?

6) What was the modality of RRT (intermittent hemodialysis versus CRRT?). For CRRT-please provide the modality (hemofiltration versus convection).

MINOR COMPULSORY REVISIONS

1) Patients on RRT had higher WBC. Did any have positive blood cultures?
2) Why was the serum K value (5.8, Table 1) so elevated in patients receiving RRT?
3) What is Trf (Table 3)?

DISCRETIONARY REVISIONS

None

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

Quality of written English: Acceptable

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