Reviewer’s report

Title: Prohepcidin, inflammation and iron parameters in hemodialysis patients with chronic hepatitis C

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Reviewer: Elísio Costa

Reviewer’s report:

This paper intends to evaluate the association between hepcidin serum levels with inflammatory and iron parameters in hemodialysis (HD) patients with hepatitis C virus infection. This work is very interesting, however, the manuscript need to be re-written in the follow aspects:

- Introduction: the pathophysiological changes in iron cycle and in inflammation, associated with HD and with hepatitis C virus infection, need to be improved. A revision of other works that studied the iron cycle, the inflammation and the levels of hepcidin (prohepcidin) in HD patients, with and without hepatitis C, must be included in this section.

- Aims: the authors intend to evaluate the association between hepcidin, inflammation and iron parameters. However, the authors evaluated the serum levels of prohepcidin, and some author’s don’t found correlation between serum levels of hepcidin and of prohepcidin. This must be discussing in the paper.

- Patients: It is not clear how the authors selected patients. In fact, the % of diabetic patients is very low in this sample. The HD patients with hepatitis C virus infection were selected firstly, and secondly HD patients without hepatitis C? the two groups of HD patients were matched by age, sex, and time under HD?

- Statistical analysis: the author’s don’t referred the statistical tests used in order to evaluate the variables that presented a non-normal distribution. Moreover, on the tables, the authors must use median values and percentile 25 and percentile 75 to present the results of variables with a non-normal distribution. The authors also say that correlations have been performed using Pearson’s correlation. However, most of the variables have a non-normal distribution... the authors have transformed the non-normal variables in normal variables?

- Results: in tables, SD is greater than median value in some parameters, i.e. hs-PCR, and total iron need. These results must be presented as median (P25-P75). The ratio neutrophil/lymphocyte must be included in the text.

- Discussion: some points must be included in discussion section, namely, the possible reasons why HD patients show an enhanced inflammatory process; the differences in rhEPO doses required to achieve the hemoglobin values; why the authors measured the serum levels of prohepcidin, and not directly the levels of hepcidin; the levels of prohepcidin in all HD patients is very similar to that found in controls. This result must be discussed because some authors described that prohepcidin are higher in HD patients (Am J Nephrol 2008;28:677-683); serum
levels of EPO seems to induce a decrease in hepcidin gene expression and inflammation an increase in hepcidin gene expression. This must also been discussed.

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

**Quality of written English:** Acceptable

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