Reviewer’s report

Title: Protective Effect of Hydrogen-Rich Saline on Pressure Overload-induced Cardiac Hypertrophy in Rats: Possible Role of JAK-STAT Signaling

Version: 0  Date: 01 Nov 2017

Reviewer: Jacques Couet

Reviewer’s report:

This is fairly well written manuscript although it lacks some important details.

In the introduction (line 15), it is written that hydrogen has been used in medical care. It is not the case since it has been assayed only in experimental settings in humans or animals.

In the methods, only dosage of HRS is indicated. I suppose HRS is administered IP once a day but this should be indicated. Is the treatment initiated at the time of surgery, before or after?

In the results section, a table should be added to include animal body weight, heart weight, LV weight, lungs (signs of heart failure) and other characteristics if available.

In Figure 2, fibrosis quantification should have been included. Include Figure 5 results with Figure 4.

The main problem with this study is that we do not know if effects on the JAK-STAT pathway are direct or not. It is mentioned that II-6 is produced by neutrophils and activated macrophages in the myocardium. It is likely the case but it was not demonstrated in their studies. This should be corrected in the Discussion or demonstrated in the Results section.

Are the methods appropriate and well described?  
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?  
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?  
If not, please explain in your comments to the authors.

Yes
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

Declaration of competing interests
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?
2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?
3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?
4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?
5. Do you have any other financial competing interests?
6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests.

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal.