Reviewer's report

Title: Granulocyte colony-stimulating factor attenuates myocardial remodeling and ventricular arrhythmia susceptibility via the JAK2-STAT3 pathway in a rabbit model of coronary microembolization

Version: 0 Date: 10 Sep 2019

Reviewer: Mingwei Bao

Reviewer's report:

The authors reported that G-CSF might attenuate myocardial remodeling via JAK2-STAT3 signaling and thereby reduce ventricular arrhythmia susceptibility after CME in a rabbit model. The study is interesting. The following issues should be clarified:

1. Abstract: In the background, the author summarize they investigated the effects of granulocyte colony stimulating factor (G-CSF) on connexin-43 expression and ventricular arrhythmia susceptibility after CME. That is not accurate according to the content in the manuscript. The results should be rewritten.

2. Introduction: The relation of JAK2-STAT3 signaling pathway and Cx43 should be discussed in the introduction, if there is any, which may help with building the conception.

3. Results: The authors was to express that AG490 blocked the effect of G-CSF's effect on the echocardiographic parameters after surgery, this part should be written clearly (Page 13, line 262). The same problems exist in the other parts of the results.

4. Results (Page 14, line289), the title was G-CSF reduces infarct size and interstitial collagen fiber deposition in the myocardium via the JAK2-STAT3 pathway, actually, I have not seen any content about JAK2-STAT3 in the following sentences.

5. Figure 3, there should be a ruler in the HE and MASSON staining picture. Which part of the heart was shown in this figure? Is there an ischemic zone, border zone or distal zone?

6. Figure 4A and 4C, the positive staining should be labeled in the picture. It is better to detect the expression of G-CSFR using Immunofluorescence staining.

7. If the mechanisms should be verified through in vitro studies, how should it designed? The authors should try to verify the mechanism through in vitro studies.

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:

Acceptable

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