Reviewer’s report

Title: Protective effect of Shenmai injection on doxorubicin-induced cardiotoxicity via regulation of inflammatory mediators

Version: 1 Date: 04 Oct 2018

Reviewer: Luiz Ferreira

Reviewer's report:

Comments to the authors
General comments:
The manuscript describes the protective effects of Shenmai injection on the cardiotoxicity induced by doxorubicin. It is a well conduct research, however there is some inconsistence in the statistical analyses witch can influence the results interpretation. In this way, some points must be reviewed.

1- Abstract p. 2 Line 38
"Pretreatment with SMI elicited a dose-dependent cardioprotective effect in DOX-dosed mice as evidenced from normalization of serum AST and LDH…"
Data does not support this conclusion. In most cases, the treatments are different from control and similar to the DOX group.

2- Abstract p. 2 Line 50
Key words: Correct the word "aniti-inflammation". Suggestion: anti-inflammatory.

3- Background p.3 Line 5
"Unfortunately, DOX has too serious adverse effect of cardiotoxicity so that has limited its clinical use".
Please correct the sentence. Suggestion: "DOX has serious cardiotoxicity effects that limited its clinical use".

4- Background p.3 Line 48
"..DOX-induced cardiotoxicity via a regulation of innate immune.." Please correct the sentence.
Suggestion: "… regulating the innate immune response."

5- Methods p.6 Line 1
"...(IL-6), monocyte chemotactic protein 1 (MCP-1) and Interferon-γ (INF-γ), in serum were measured."
How the authors knows that the cytokines are relate to heart inflammation. Why do not evaluate the cytokines in cardiac tissue?
6- Methods p.6 Line 44
"Statistics. Data are expressed as means ± S.D..."
This information is different from the figure legend. In the figure legends they are describe as mean ± SEM. Please, confirm the correct the information and review all the statistical analyses.

7- Results p.7 Line 2
"General observations. All experimental mice are still alive."
Please correct the sentence.

8- Results p.7 Line 7
"...DOX also caused a significant decrease (P < 0.05) in heart weight and heart-to-body weight.."
According to Table 1 there is no statistical difference between control and DOX group in relation to heart-to-body weight. Please review this result.

9- Results p.7 Line 9
"The mice in SMI pretreated group, especially in the DOX + SMI (H) group, be weakened DOX-induced decrease in heart weight (P < 0.05).
There was no statistical difference in relation to DOX group. The group DOX+Aft-SMI (H) showed statistical difference. Please review this information, maybe the group is wrong.

10- Results p.7 Line 30
"...embodied in CO and EF parameters in DOX + SMI (H) and DOX + SMI (M) Groups (Figure 3 H-K)."
Please clarify this information and verify statistics. In relation to EF, most of SMI groups does not showed statistical difference in relation to DOX group.

11- Results p.7 Line 52
"Hearts sections of DOX-treated mice revealed exhibit vacuolar and.."
Exclude the word "revealed".

12- Results p.7 Line 52
"As grades scores showed in the Fig.5 H, there was a good dose-effect histopathological improvement in the groups of mice pretreated with 0.5, 15 and 5 g/kg of SMI."
Please correct the number 15 for 1.5. Add the information about the focal myofibrillar loss.

13- Results p.8 Line 25
"Pretreatment of SMI significantly decrease the expression of iNOS in DOX-injected mice."
Please change the word "decease" for decrease. The Western blot analyses there was statistical difference only between DOX and DOX + SMI (H). Please clarify this information.
14- Discussion p.9 Line 45
"..DOX invited a significant increase in NF-κB binding activity."
Please change the term "invited" to led.

15- Discussion p.9 Line 47
"..pro-inflammatory mediators expression, including TNF-a, IL-1b and NO.."
Please correct the terms TNF-a and IL-1b. Use the same abbreviations throughout the manuscript (TNF-α and IL-1β).

16- Table 1
Delete the symbol # in the group DOX on the Heart weight evaluation.

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.

No

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 recommend additional statistical review

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Please indicate the quality of language in the manuscript:

Needs some language corrections before being published
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