

Dear Editors and Reviewers:

Thank you very much for your careful review and constructive suggestions with regard to our manuscript “The Neurotrophic Effects of Dental Pulp Stem Cells in the Repair of Peripheral Nerve after Crush Injury”. Those comments are very valuable and helpful for us to revise and improve our paper, as well as the importance guiding significance to our researches. We have studied these comments carefully and tried our best to revise the manuscript. Then main corrections in the paper and the responds to the reviewer’s comments are as following:

Reviewer1

1. Response to comment 1: In introduction part, we pointed out the lesion of IAN/LN. The main purpose of our research is aim to find out an effective way for nerve injury after tooth distraction. However, the measurement evaluation of the recovery of IAN or LN is limited. So we chose the model of sciatic nerve injuries for it not only can be observed for anatomical recovery but of could be observed for functional recovery. The innovative fact of our experiment is to use dental pulp stem cells as the seed cells to cure IAN/LN injury. We could isolate and culture dental pulp cells from extracted teeth and store them as seed cells for nerve repair, which can turn discarded clinical waste into a potential therapeutic resource.
2. Response to comment 2: It is really true that we did not state the difference between normal group and control group, so we added the explanation of Normal, Control, DPSC and N-DPSC group in the article. In 2.9 part normal group is rat without surgical treatment, control groups are rat surfing nerve crush without treatment.

The reason we euthanasia at 30 days: Through the evaluating of SFI (the motor function recovery), we found out that the recovery of motor function of all group tended to be stable on 21 days to 30 days, so we euthanasia the rats at 30 days
3. Response to comment 3: Thank you for the suggestion. A table for gastrocnemius muscle atrophy after nerve crush injury was added in the article.
4. Response to comment 4: The repeated figure number of Fig5 was removed
5. Response to comment 5: The limitation of this experiment has been added and discussed in the end of this article.

Reviewer2:

It is really true as Reviewer suggested that the source of dental pulp stem cells is limited compared to MSCs that derived from human umbilical cord blood or iPSCs. However, the DPSCs are a kind of MSCs that are derived from neural crest, so it has a higher potential for neural differentiation. We may consider iPSCs or MSCs that derived from human umbilical cord blood in our further researches.

Other revision:

Article highlights were added at the end of the manuscript.

Really thanks to all the suggestions from reviewers. We have tried our best to improve the manuscript. We really appreciate reviewers' warm work earnestly, and hope the correction will meet with approval.

Once again, thank you very much for your comments and suggestions.

Best wishes,

Jian Pan