

Peer Review File

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Reviewer A

Comment 1: What is the rationale for including only neurolysis and neurorrhaphy without graft? The majority of trigeminal nerve repairs after 2008 include the use of allograft since the surgical gaps larger than 5mm require tension-less repairs that cannot be done with neurorrhaphy alone without compromise to the result measured in FSR. If there is adequate rationale to not include neurorrhaphy with graft (auto- or allo-) then recommend the authors point this out in the title and conclusions since there is no evidence that PRP would have benefits of accelerated recovery in the graft environment.

Reply 1: Although we did contemplate including nerve graft cases to this retrospective study, we did not want to include an additional variable (i.e. graft) at this time. We plan to further this study with an additional study for the use of nerve grafts. The title and conclusion now address this.

Comment 2: The literature supports both accelerated and greater FSR grading when the dependent factor is the Sunderland classification. The form of surgery would parallel the Sunderland classification so in this study a neurolysis would likely be associated with Sunderland I, II, III whereas neurorrhaphy would be associated with Sunderland IV and V. The authors use the Seddon Classification and point out greater numbers of neurotmesis in PRP group versus Non-PRP. A table showing the distribution would be helpful to clarify the various treatment arms

Reply 2: An additional table has been added in regards to the distribution of PRP to the Neurotmesis and Axonotmesis

Comment 3: The topical application of PRP was unclear for these two groups of repairs. A nerve conduit was used and described for the neurorrhaphy group. Was a conduit used for the neurolysis group?

Reply 3: A conduit was used for both neurorrhaphy and neurolysis, page 2 lines 12/13, 16

Comment 4: The authors need to provide clarification on the topical PRP application. A)Where was it placed (around the exposed nerve, in the conduit, around the conduit. B) How much was placed? Was there a difference in amount when placed for neurolysis or neurorrhaphy groups. C)How was the PRP retained?

Reply 4: Clarification was provided in more detail.

- A) The PRP gel was applied to the entire wound bed
- B) 3 cc of PRP was used to create a gel and applied to all nerve repairs
- C) The PRP gel was enclosed in the wound upon closure.

Comment 5: Independent Student T demonstrated significant differences in time to FSR in the two different groups. However, the sample is small. Recommend the authors conduct a Kaplan Meier estimate which would better clarify the differences in time over the study period and parameters since the follow up range was 3 to 18 months.

Reply 5: I agree that the independent sample t-test is not a good method to compare any continuous variable with a small sample size, especially the data is not normally distributed. A Kaplan-Meier procedure is used for survival analysis and data usually includes some censored cases, which is different from our data. I thought of the small sample sizes that we had, so thus we used Non-parametric tests (Mann Whitney U test) to compare all the outcomes including the time to FSR. Mann Whitney U test is for the data with small sample size or abnormal distribution. We have substituted the 4th table result (Nonparametric tests), which had same results as the independent sample t-tests.

Comment 6: I could not find any reference to Tables 3 and 4 in the text of the paper

Reply 6: Table 3 and 4 are referenced in the results section

Comment 7: I could not find references #28 to 33 in the text of the paper

Reply 7: References #28-33 were removed due to not be cited

Reviewer B

The authors submitted a retrospective study to compare LN repair with or without PRP. The hospital records were evaluated for data collection. The follow-up time has to be 3 months or more.

I have the following comments/questions regarding this study:

Comment 1: What were the reasons / criteria to use / not use PRP ? I would suggest to include this in the Materials and Methods

Reply 1: PRP was believed to improve neurosensory outcomes given the growth factors involved as described in the introduction. When available PRP was applied to all nerve repair cases, not using a specific criteria.

Comment 2: I would suggest to have a subheading in the Materials and Methods for the surgical technique that also include the preparation of PRP. Since the study exclude the use of nerve grafts, the part that describe the use of nerve conduit and fibrin glue should be removed to avoid confusion

Reply 2: Regardless of nerve graft use, conduits and fibrin glue were used on all repairs. The PRP harvest and application was discussed in more detail in the material and methods section.

Comment 3: What's the required sample size? What are the primary outcome and secondary outcomes? What is considered to be clinically significance? I am sure it will be beneficial if these are included (especially in the conclusion the authors said sample size was not enough)

Reply 3: The only primary outcome that has a adequate confidence interval is the time until S3 was achieved, which also is clinically significant for the PRP group.

Comment 4: It is good to list out the inclusion and exclusion criteria in the Materials and Methods

Reply 4: In section, "Patient and Methods," Paragraph 14 discusses the inclusion/exclusion criteria.

Comment 5: The actual no. of nerve that were studied was 28. The cases that had nerve grafted were excluded and should not be reported at all, as well as the cases that did not meet the minimal follow-up. Starting to report of 47 patients included appeared to be "inflating" the actual sample.

Reply 5: Unfortunately of the 47 cases investigated since the start of the study; only 28 achieved the 3 month follow up and did not include the use of a nerve graft.

Comment 6: I don't recommend to report the results by writing " The P value resulted in ..." (line 146), or "P value was ..." (line 149). IT should be reported if the differences were significant or not significant, with the p-value in bracket ().

Reply 6: Statements were corrected

Comment 7: I recommend to put a section / paragraph on the limitation of the current study, namely, small sample, limitations of retrospective study design etc

Reply 7: I have added a paragraph at the end of the discussion regarding limitations.

Comment 8: What is written in the Conclusion now should be put in the discussion. A conclusion should conclude the finding of the study in an objective manner. Suggest revision of this section.

Reply 8: The conclusion is intended to help the reader understand why the application of PRP should matter.