Answering Reviewers

Thank the reviewers for the comments concerning our manuscript entitled "Comparative study of surface electromyography of masticatory muscles in patients with different types of bruxism"(No. 76281). These comments are very helpful for revising and improving our paper. We have studied comments carefully and have made corrections. The responds to the reviewer's comments are as follows:

Comment of reviewer #1

The authors define the bruxism motion as a rhythmic masticatory muscle activity that occurs involuntarily in a non-physiologically functional state. Their hypothesized that there are differences in the types of muscle affected by different kinds of this special motion. The authors try to determine whether there are differences in the muscles involved in bruxism in patients with different types of mandibular movements by analyzing the characteristics of TA and MM contraction sEMG signals in different mandibular positions and chewing activities. They provided a physiological basis for the diagnostic classification and the selection of appropriate treatment options for bruxism patients with different types of mandibular movements. The document is well written and structured. The given background in the Introduction is easy to follow and cites the recent appropriate papers. It provides a hypothesis or aim of the study well located in relation to the state of the art of existing works. The headline is well suited to the content of the manuscript. It is a complete work of good scientific quality, both on the experimental side and on the objective analyzes of the data. The statistical approach reflects the mastery and deep understanding of the subject. The choice of references is satisfactory. But maybe the authors can do better on the recent aspect of the list.

Author's response: We thank the reviewer for the comment.

Comment of reviewer #2

1. The abstract is too voluminous - 399 words. Please reduce it to 250 words!

Author's response: We thank the reviewer for the comment. We have revised the abstract and made it less than 250 words.

Comment of reviewer #2

2. Bruxism is a widespread parafution that few dentists know how to treat properly. The article includes important information about muscle activity and opens the door to treatment by influencing it. I would recommend the authors to enrich their literature with other ways of research: 1. Shopova, D., Bozhkova, T., Yordanova, S., & Yordanova, M. (2021). Case Report: Digital analysis of occlusion with T-Scan Novus in occlusal splint treatment for a patient with bruxism. F1000Research, 10. 2. Taneva, I., Uzunov, T., & Milanov, N. Complete digital approach for bruxism management. 3. Kosturkov, D., Taneva, I., & Uzunov, T. Examination of pulp innervation of teeth with abrasion. 4. Bozhkova, T., & Shopova, D. (2021). T-Scan Novus System in the Management of Splints — Pilot Study. European Journal of Dentistry. 5. Pita, M. S., Ribeiro, A. B., Garcia, A. R., Pedrazzi, V., & Zuim, P. R. J. (2011). Effect of occlusal splint thickness on electrical masticatory muscle activity during rest and clenching. Brazilian oral research, 25 (6), 506-511.

Author's response: We thank the reviewer for the comment. The references mentioned in this comment are of great help in improving our manuscript. We cite the literature and add the discussion of the basic principles of occlusal splints for the treatment of bruxism, the types of occlusal splints that should be used according to the mandibular movement characteristics of the different types of bruxism and the corresponding reasons. Please read "4.5 Clinical implication of this study" in the discussion section.

Comment of reviewer #2

3. Well described and structured methodology!

Author's response: We thank the reviewer for the comment.

Comment of reviewer #2

4. Well described and illustrated results!

Author's response: We thank the reviewer for the comment.

Comment of reviewer #2

5. Quite a voluminous and detailed part of the discussion!

Author's response: We thank the reviewer for the comment. We have revised the discussion to focus on the types of masticatory muscle affected by different types of bruxism, changes in the functional status of the affected muscle, and the clinical implications for guiding clinicians in the use of occlusal splint for the treatment of bruxism.

EDITORIAL OFFICE'S COMMENTS

Comment of science editor: This is a momparative study of surface electromyography of masticatory muscles in patients with different types of bruxism. They provided a physiological basis for the diagnostic classification and the selection of appropriate treatment options for bruxism patients with different types of mandibular movements. It is a complete work of good scientific quality but some small details need further refinement. 1. The abstract and discussion is too voluminous. The content needs to be further refined. 2. please provide documents following the requirements in the journal's Guidelines for manuscript type and related ethics: （1） Conflict-of-Interest Disclosure Form；（2） Copyright License Agreement.

Author's response: We thank the science editor for the comment.

1. We have revised the abstract to be more concise (less than 250 words).

For the discussion section, we have added further details on occlusal splints for bruxism based on the reviewers' comments. Meanwhile, we have simplified the discussion and focused on the types of masticatory muscle affected by different types of bruxism, changes in the functional status of the affected muscle, and the clinical implications for guiding clinicians in the use of occlusal splint for the treatment of bruxism.

The language of this manuscript has again been polished. New language certificate has been provided in the manuscript.

2. We have provided the Conflict-of-Interest Disclosure Form and the Copyright License Agreement document in the manuscript revision. We hope these can meet the requirements.

Comment of company editor-in-chief: I have reviewed the Peer-Review Report, full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Clinical Cases, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all graphs or arrows or text portions can be reprocessed by the editor. In order to respect and protect the author's intellectual property rights and prevent others from misappropriating figures without the author's authorization or abusing figures without indicating the source, we will indicate the author's copyright for figures originally generated by the author, and if the author has used a figure published elsewhere or that is copyrighted, the author needs to be authorized by the previous publisher or the copyright holder and/or indicate the reference source and copyrights. Please check and confirm whether the figures are original (i.e. generated de novo by the author(s) for this paper). If the picture is 'original', the author needs to add the following copyright information to the bottom right-hand side of the picture in PowerPoint (PPT): Copyright ©The Author(s) 2022. Authors are required to provide standard three-line tables, that is, only the top line, bottom line, and column line are displayed, while other table lines are hidden. The contents of each cell in the table should conform to the editing specifications, and the lines of each row or column of the table should be aligned. Do not use carriage returns or spaces to replace lines or vertical lines and do not segment cell content.

Author's response: We thank the editor-in-chief for the comment. We have provided the original figures and the PowerPoint document in the manuscript revision. We hope these can meet the journal's standard.