

# Comparison of laser therapy and ozonated water on gingival

# inflammation in orthodontic patients with fixed appliances

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Handling editor: Michal Heger Department of Pharmaceutics, Utrecht University, the Netherlands Department of Pharmaceutics, Jiaxing University Medical College, Zhejiang, China

Review timeline:

Received: 25 January, 2021 Editorial decision: 28 February, 2021 Revision received: 23 March, 2021 Editorial decision: 6 May, 2021 Revision received: 2 June, 2021 Editorial decision: 8 June, 2021 Revision received: 29 June, 2021 Editorial decision: 5 July, 2021 Revision received: 4 September, 2021 Editorial decision: 6 September, 2021 Published online: 27 September, 2021

1<sup>st</sup> Editorial decision 28-Feb-2021

Ref.: Ms. No. JCTRes-D-21-00016 Comparison of laser therapy and ozonated water on gingival inflammation in orthodontic patients with fixed appliances. Journal of Clinical and Translational Research

Dear Dr. Sandra,

Reviewers have now commented on your paper. You will see that they are advising that you revise your manuscript. If you are prepared to undertake the work required, I would be pleased to reconsider my decision.

For your guidance, reviewers' comments are appended below.

If you decide to revise the work, please submit a list of changes or a rebuttal against each point which is being raised when you submit the revised manuscript. Also, please ensure that



the track changes function is switched on when implementing the revisions. This enables the reviewers to rapidly verify all changes made.

Your revision is due by Mar 30, 2021.

To submit a revision, go to https://www.editorialmanager.com/jctres/ and log in as an Author. You will see a menu item call Submission Needing Revision. You will find your submission record there.

Yours sincerely

Michal Heger Editor-in-Chief Journal of Clinical and Translational Research

Reviewers' comments:

Reviewer #1: An original research report is presented in which the investigators assessed and compared low-level laser therapy with subgingival irrigation using ozonated water on gingivitis in patients undergoing fixed orthodontic treatment. They also measured the inflammatory marker monocyte chemoattractant protein (MCP-1) in gingival crevicular fluid (GCF) and assessed clinical parameters such as gingival index (GI), plaque index (PI) and gingival bleeding index (GBI). The investigators conclude that low-level laser therapy can be an effective technique in patients receiving fixed orthodontic treatment for managing improvements in gingival inflammation.

Major comments:

- The use of LLLT or low-level laser therapy is reserved for describing a cold laser for photobiomodulation (PBM). The investigators in this study used a different type of laser that is not LLLT or PBM. This has to be changed throughout the entire manuscript in order to avoid confusion to readers.

- The authors provide nowhere in the manuscript the level of MCP-1 associated with inflamed gingiva, this is an important piece of information that should be used to compare MCP-1 levels associated with experimental therapeutics, this also provides a greater incentive for pursuing a study of this kind.

## INTRODUCTION:

- Writing lacks precision and there is no hypothesis or clearly stated aim.

#### MATERIALS AND METHODS:

- Each piece of the M&M section should receive a separate subheading coinciding with each step or part of the investigation (e.g., study participants, experimental design, collection of saliva, ELISA procedure and analysis, statistical section).

## **RESULTS**:

- Results section is presented partially as a M&M and no text is written describing the results or referring to tables and/or figures. Section should be completely revised and presented according to an academic standard consistent with quality scientific publications.

- 3.1: moved to the M&M section and as the last subheading titled, Statistical analysis. Also a sample size motivation or power analysis should be included.



- 3.2 as a subheading should be removed and the text used as a regular results section writing.

## DISCUSSION:

- Discussion lacks more perspective and details concerning different components/aspects of the study.

- No statements are presented reflecting any potential confounders of limitations of the study. This being either design, investigational procedures and the small sample size considering the number of general cases involving orthodontic brackets.

- Missing a dedicated concluding paragraph.

Authors' response

From,

Dr.S.V. Kala Vani,

Prof. and HOD,

Dept. of Orthodontics and Dentofacial Orthopedics,

C.K.S.Theja Institute of Dental Sciences and Research,

Tirupati, Andhra Pradesh,

India.

To,

The editor,

Journal of clinical and translational research.

Sub: Point to point response to the reviewer comments.

Hello sir,

This is Dr. Kala Vani, Professor and HOD of Department of Orthodontics and Dentofacial Orthopedics, writing this letter as a point-to-point response to the comments regarding the manuscript titled comparison of laser therapy and ozonated water on gingival inflammation in orthodontic patients with fixed appliances.

#### Major comments:

- 1. The use of LLLT or low-level laser therapy is reserved for describing a cold laser for photobiomodulation (PBM). The investigators in this study used a different type of laser that is not LLLT or PBM. This has to be changed throughout the entire manuscript in order to avoid confusion to readers.
- → Instead of Low-level laser therapy or LLLT, it was changed to Laser therapy, diode laser throughout the manuscript.
- 2. The authors provide nowhere in the manuscript the level of MCP-1 associated with inflamed gingiva, this is an important piece of information that should be used to



compare MCP-1 levels associated with experimental therapeutics, this also provides a greater incentive for pursuing a study of this kind.

→ Within the introduction, chemokines and its effects and use of MCP-1 as a screening tool was added along with a reference.

#### 3. INTRODUCTION:

- Writing lacks precision and there is no hypothesis or clearly stated aim.

- → The last paragraph in the introduction segment was changed clearly stating the requirement of this study as well as the aim of the present study.
- 4. MATERIALS AND METHODS:

- Each piece of the M&M section should receive a separate subheading coinciding with each step or part of the investigation (e.g., study participants, experimental design, collection of saliva, ELISA procedure and analysis, statistical section).

- → The section materials and methods were sub categorized into separate subheadings as Study participants, Experimental design, Collection of GCF, Ozone irrigation, Laser irradiation, GCF sampling procedure, Patient's instructions, ELISA procedure, Statistical
- 5. RESULTS:

- Results section is presented partially as a M&M and no text is written describing the results or referring to tables and/or figures. Section should be completely revised and presented according to an academic standard consistent with quality scientific publications.

→ All the data was reported in tables 1-5. Intergroup comparison was reported in table 1. ANOVA for laser group was reported in table 2. ANOVA for ozonated water group was reported in table 3. Pearson correlation test at day o and on day 28 were reported n tables 4 and 5. Interpretation of each table was written above each table.

- 3.1: moved to the M&M section and as the last subheading titled, Statistical analysis. Also a sample size motivation or power analysis should be included.

- → Statistical analysis which was written as a subheading in results section (3.1) was changes to 2.9 in materials and methods section.
- $\rightarrow$  Power analysis for the study was stated in section 2.9 i.e., statistical analysis.

- 3.2 as a subheading should be removed and the text used as a regular results section writing.

- $\rightarrow$  Now, there are no sub headings in the results section.
- 6. DISCUSSION:

- Discussion lacks more perspective and details concerning different components/aspects of the study.



➔ An introduction paragraph was included now, stating the need and why this study was conducted, methods employed.

- No statements are presented reflecting any potential confounders of limitations of the study. This being either design, investigational procedures and the small sample size considering the number of general cases involving orthodontic brackets.

→ Within the discussion section, it was now mentioned about the carry-across effect, which is a potential consequence in split-mouth design, strict eligibility criteria that led to recruitment of limited study sample.

- Missing a dedicated concluding paragraph.

→ In the discussion section, the last paragraph was a concluding paragraph which states the importance of additional oral hygiene methods that could be employed in the fixed appliance patients as it controls gingival inflammation.

A document with the corrections done and enabling the track changes feature was already uploaded on march 23<sup>rd</sup>, 2021. Kindly consider it and let us know if any further modifications are required.

Thank you,

Yours faithfully, Dr.S.V. Kala Vani, Prof. and HOD, Dept. of Orthodontics and Dentofacial Orthopedics.

2<sup>nd</sup> Editorial decision 06-May-2021

Ref.: Ms. No. JCTRes-D-21-00016R1 Comparison of laser therapy and ozonated water on gingival inflammation in orthodontic patients with fixed appliances. Journal of Clinical and Translational Research

Dear author(s),

Reviewers have submitted their critical appraisal of your paper. The reviewers' comments are appended below. Based on their comments and evaluation by the editorial board, your work was FOUND SUITABLE FOR PUBLICATION AFTER MINOR REVISION.

If you decide to revise the work, please itemize the reviewers' comments and provide a point-bypoint response to every comment. An exemplary rebuttal letter can be found on at http://www.jctres.com/en/author-guidelines/ under "Manuscript preparation." Also, please use the track changes function in the original document so that the reviewers can easily verify your responses.



Your revision is due by Jun 05, 2021.

To submit a revision, go to https://www.editorialmanager.com/jctres/ and log in as an Author. You will see a menu item call Submission Needing Revision. You will find your submission record there.

Yours sincerely,

Michal Heger Editor-in-Chief Journal of Clinical and Translational Research

**Reviewers' comments:** 

Reviewer #1: The authors produced a much better draft of their original manuscript. Is there a project registration number the authors can provide for this study with regards to ethical approval? I have no other queries at this time.

Authors' response



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C.K.S THEJA INSTITUTE OF DENTAL SCIENCE & RESEARCH (Recognized by DCI & Ministry Health & Family Welfare Govt. of India) Affiliated to Dr. NTR University of Health Sciences. A.P.)

PROCEEDINGS OF THE INSTITUTIONAL ETHICAL COMMITTEE

#### CERTIFICATE

This is to certify that the synopsis titled "Evaluation and comparison of laser therapy and ozonated water on gingival inflammation in orthodontic patients with fixed appliances" submitted by Dr. S. Bindu Priya, PG student from the Department of Orthodontics and Dentotacial Orthopedics with reference no: CKS/Ortho/18-19/007 has been evaluated and ethical clearance has been granted in the meeting held on 29<sup>th</sup> June 2020 to continue the above-mentioned study.

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Date 30 16 /2020 6 Secretary -lely 1 Principal Institutional Ethical Committee AL SCIER PRINCIPAL C.C.S. TEJA INSTITUTE DA "ENTAL SCIENCES AND HILLEARCO CALAVAGA NAGAR, THREPART (2017) Searchary matthe tronal Libles Committee TRUTAT

Chadalawada Nagar, Renigunta Road, Tirupati - 517 506, Chittoor District, Andhra Pradesh. www.cksdental.org



3<sup>rd</sup> Editorial decision 08-Jun-2021

Ref.: Ms. No. JCTRes-D-21-00016R2 Comparison of laser therapy and ozonated water on gingival inflammation in orthodontic patients with fixed appliances. Journal of Clinical and Translational Research

Dear author(s),

Reviewers have submitted their critical appraisal of your paper. The reviewers' comments are appended below. Based on their comments and evaluation by the editorial board, your work was FOUND SUITABLE FOR PUBLICATION AFTER MINOR REVISION.

If you decide to revise the work, please itemize the reviewers' comments and provide a pointby-point response to every comment. An exemplary rebuttal letter can be found on at http://www.jctres.com/en/author-guidelines/ under "Manuscript preparation." Also, please use the track changes function in the original document so that the reviewers can easily verify your responses.

Your revision is due by Jul 08, 2021.

To submit a revision, go to https://www.editorialmanager.com/jctres/ and log in as an Author. You will see a menu item call Submission Needing Revision. You will find your submission record there.

Yours sincerely,

Michal Heger Editor-in-Chief Journal of Clinical and Translational Research

Reviewers' comments:

Dear authors,

Your manuscript has now successfully passed peer review. However, before we can publish the manuscript, we kindly ask you to proofread the manuscript and eliminate all errors in compliance with our guidelines regarding academic English (https://www.jctres.com/en/author-guidelines/).

Please do not take this task lightly.

The best strategy is to get help from a native speaker if you cannot do this sufficiently well yourselves (which may be the case given the syntax errors). If that proves difficult, it is recommended to contract a proofreader. JCTR also has on-staff reviewers who can help for a fee.

For example, MCP-1 are not chemokines (Introduction). MCP-1 is a protein that is classified as a chemokine.



It is advisable that you do not overestimate your English skills, as we should prevent circling back and forth in case I do not deem your level "academic English" enough.

Thanks and good luck.

Michal Heger Editor

4th Editorial decision 05-Jul-2021

Ref.: Ms. No. JCTRes-D-21-00016R3 Comparison of laser therapy and ozonated water on gingival inflammation in orthodontic patients with fixed appliances. Journal of Clinical and Translational Research

Dear author(s),

Reviewers have submitted their critical appraisal of your paper. The reviewers' comments are appended below. Based on their comments and evaluation by the editorial board, your work was FOUND SUITABLE FOR PUBLICATION AFTER MINOR REVISION.

If you decide to revise the work, please itemize the reviewers' comments and provide a pointby-point response to every comment. An exemplary rebuttal letter can be found on at http://www.jctres.com/en/author-guidelines/ under "Manuscript preparation." Also, please use the track changes function in the original document so that the reviewers can easily verify your responses.

Your revision is due by Aug 04, 2021.

To submit a revision, go to https://www.editorialmanager.com/jctres/ and log in as an Author. You will see a menu item call Submission Needing Revision. You will find your submission record there.

Yours sincerely,

Michal Heger Editor-in-Chief Journal of Clinical and Translational Research

Reviewers' comments:

Dear authors,

Thank you for resubmitting your work to JCTR.

I have studied the manuscript and the changes that were implemented, which were mainly geared towards improving the language.



This has not happened to a satisfactory level, as the manuscript still contains a plethora of grammar/spelling/syntax inconsistencies.

I had asked you previously to engage a native speaker or contract a proofreader as it was evident that you could not handle my request. I had also indicated that the journal could provide a qualified language editor for a fee.

I would like to extend one more chance to you to improve the text. If this does not occur to a satisfactory level, I will be forced to reject the manuscript in line with the journal's policy on academic level English.

Thank you and kindest regards,

Michal Heger Editor

5<sup>th</sup> Editorial decision 06-Sept-2021

Ref.: Ms. No. JCTRes-D-21-00016R4 Comparison of laser therapy and ozonated water on gingival inflammation in orthodontic patients with fixed appliance. Journal of Clinical and Translational Research

Dear authors,

I am pleased to inform you that your manuscript has been accepted for publication in the Journal of Clinical and Translational Research.

You will receive the proofs of your article shortly, which we kindly ask you to thoroughly review for any errors.

Thank you for submitting your work to JCTR.

Kindest regards,

Michal Heger Editor-in-Chief Journal of Clinical and Translational Research

Comments from the editors and reviewers: