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OPEN PEER REVIEW

Transcutaneous Pulsed Radiofrequency Treatment in Patients with Osteoarthritis of the Upper Extremity

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About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

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1 Original submission

6 comments · 4 Apr 2024 – 21 Apr 2024

Referee 1 Reviewer

MINOR REVISION 4 Apr 2024

Dear Authors
Please refer to the following articles:
1-GHASEMI, Mahshid, et al. Comparison of the effect of bicarbonate, hyaluronidase, and lidocaine injection on myofascial pain syndrome. Anesthesiology and Pain Medicine, 2020, 10.3.
2-TAHERI, Mehrdad; BEHNAZ, Faranak; GHASEMI, Mahshid. Efficacy of Intramuscular Injection of Calcitonin on Pain Functional Status of Patients with Knee Osteoarthritis. Anesthesiology and Pain Medicine, 2023, 13.2.

Referee 2 Reviewer

MINOR REVISION 20 Apr 2024

Hello, Authors.
Thank you for contributing to the journal.
I read the article and have some queries and thoughts;
1. What is this study's key novelty? There are numerous articles demonstrating the effectiveness of Transcutaneous Pulsed Radiofrequency treatment in patients with osteoarthritis of the upper extremity.
2. In the abstract, the background must be divided into background and objectives.
3. In the methods section of the abstract, briefly mention from which records you collected retrospective data and over what period.
4. The introduction is useful; however, it might be briefer. Consider reducing background information to make it more focused.
5. In the methods section, elaborate on how retrospective data extraction was done. Explain how 37 patients were included in the study over a one-year period, and show this in a flowchart.
6. In the methods section, describe the procedure in sufficient detail.
7. Is the study single-blinded or double-blinded, and if so, how was blinding done?
8. In the Discussion section, try to compare more previous studies with yours.
9. The conclusion should be written under a separate heading after the Discussion section.
10. References should not be more than 5 years old.

Referee 3 Reviewer

MAJOR REVISION 21 Apr 2024

I was pleased to have the opportunity to review the manuscript entitled 'transcutaneous pulsed radiofrequency in patients with upper extremity Osteoarthritis'. The manuscript presents interesting findings on the use of TcPRF for upper extremity OA. However, the retrospective design and small sample size are major limitations. Additionally, the lack of data on specific demographics, treatment details, and objective outcome measures could limit the generalizability of the findings. I believe that after addressing the following recommendations, the manuscript might be considered as a BRIEF REPORT. My queries follow.
• Introduction:
o Briefly mention the mechanism of action of TcPRF (if known).
o Emphasize the novelty of the study by highlighting that it's the first to investigate TcPRF for upper extremity OA.
• Methods:

o Specify the type of retrospective study design (e.g., chart review).
o Mention how the sample size was determined (if applicable).
o Describe how pain was assessed during follow-up phone consultations (e.g., standardized instructions).
• Results:
o Consider presenting demographics of the patients (e.g., age, sex, specific joint affected).
o Briefly mention if there were any missing data points.
• Discussion:
o Discuss potential reasons for the smaller effect size compared to previous TcPRF studies (e.g., treatment dosage, electrode placement).
o Acknowledge potential selection bias due to the retrospective design.

Referee 4 Reviewer — MINOR REVISION — 21 Apr 2024

Dear AE,
The research article provides valuable insights into the effectiveness and safety of TcPRF treatment for osteoarthritis of the upper extremity. The study is well-conducted and the findings are clearly presented. With the minor corrections suggested, it will be a strong addition to the field:
-The abstract provides a clear overview of the study's objectives, methods, results, and conclusions. However, it lacks specific data on effect sizes for all measurements and could be enhanced by summarizing the main findings more concisely. It could also be strengthened by adding the numerical values of effect sizes in the conclusion.
-Some sentences lack references. All sentences quoted from other articles must have references at the end.
-The methods section is well-structured and provides a clear understanding of the study's design, the population studied, and the interventions involved. However, the detailed parameters of the TcPRF procedure, such as the frequency of the pulses, could be included for better clarity.

Associate Editor — MAJOR REVISION — 21 Apr 2024

Dear EIC,
I thank the authors and express my appreciation to the researchers. The manuscript is a valuable piece of research. But some revisions are needed as requested by the reviewers.

Editor-in-Chief — MAJOR REVISION — 21 Apr 2024

Dear Author,
Thank you for submitting the article. It needs some revision. Please revise it based on the reviewers' and AE's comments.

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Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Journal of Anesthesiology and Pain Medicine ID: 146816

Breda, June 11th, 2024

Subject: Revision manuscript ‘Transcutaneous Pulsed Radiofrequency treatment in patients with osteoarthritis of the upper extremity’

Dear editors and reviewers,

We would like to thank you for your valuable comments regarding our manuscript ‘Transcutaneous Pulsed Radiofrequency treatment in patients with osteoarthritis of the upper extremity’. Please find the author’s responses to all the comments in the point-by-point response.

Sincerely,

On behalf of all authors

Remarks	Authors' Responses	Text Changes
Reviewer #1*:* *I was pleased to have the opportunity to review the manuscript entitled 'transcutaneous pulsed radiofrequency in patients with upper extremity Osteoarthritis'. The manuscript presents interesting findings on the use of TcPRF for upper extremity OA. However, the retrospective design and small sample size are major limitations. Additionally, the lack of data on specific demographics, treatment details, and objective outcome measures could limit the generalizability of the findings. I believe that after addressing the following recommendations, the manuscript might be considered as a BRIEF REPORT. My queries follow.*		
Introduction		
Briefly mention the mechanism of action of TcPRF (if known).	We added the proposed mechanisms of action	Lines 65-71
Emphasize the novelty of the study by highlighting that it's the first to investigate TcPRF for upper extremity OA	In the last paragraph of the introduction we explained that previous studies on TcPRF did not specify the underlying diagnoses of the described pain. We added 'Therefore' in the concluding sentence of our introduction to emphasize that this is the first study to investigate TcPRF for upper extremity OA.	Lines 79-82
Methods		
Specify the type of retrospective study design (e.g., chart review).	A chart review was added.	Line 89-90 + Figure 1 (line 410).

Mention how sample size was determined (if applicable).	NA. All patients who were referred by the orthopedic surgeon with painful osteoarthritis of the upper extremity and received TcPRF treatment were included.	NA
Describe how pain was assessed during follow-up phone consultations (e.g., standardized instructions).	All patients received a standardized form on which they could record their pain scores. We specified the method how pain was assessed.	Line 110-112
Results		
Consider presenting demographics of the patients (e.g., age, sex, specific joint affected).	Demographics of the patients are presented in Table 1 and described in the first paragraph of the results section.	NA
Briefly mention if there were any missing data points.	See line 149	Line 149
Discussion		
Discuss potential reasons for the smaller effect size compared to previous TcPRF studies (e.g., treatment dosage, electrode placement).	See lines 239-258	NA
Acknowledge potential selection bias due to the retrospective design.	See lines 272-275	NA
Remarks	**Authors' Responses**	**Text Changes**
Reviewer #2: *Dear Authors* *Please refer to the following articles:* *1-GHASEMI, Mahshid, et al. Comparison of the effect of bicarbonate, hyaluronidase, and lidocaine injection on myofascial pain syndrome.*	However, these are articles with interesting conclusion about injections of bicarbonate, hyaluronidase and lidocaine and intramuscular calcitonin	NA

Anesthesiology and Pain Medicine, 2020, 10.3. *2-TAHERI, Mehrdad; BEHNAZ, Faranak; GHASEMI, Mahshid. Efficacy of Intramuscular Injection of Calcitonin on Pain Functional Status of Patients with Knee Osteoarthritis. Anesthesiology and Pain Medicine, 2023, 13.2.*	injections, we think that they are not of supporting to describe our research.	
Remarks	**Authors' Responses**	**Text Changes**
Reviewer #3: *Hello, Authors.* *Thank you for contributing to the journal.* *I read the article and have some queries and thoughts in my mind;*		
1. What is this study's key novelty? There are numerous articles demonstrating the effectiveness of Transcutaneous Pulsed Radiofrequency treatment in patients with osteoarthritis of the upper extremity.	See last paragraph of the introduction (lines 77-81). Previous studies on TcPRF investigated the effectiveness of TcPRF on shoulder/knee pain. The underlying diagnoses of pain was not specified, which makes it difficult to conclude whether TcPRF treatment is effective for specific diagnoses, e.g. osteoarthritis.	
Abstract		
2. In abstract background must be divided into background and objectives.	We added the subheading Objectives in the abstract	Lines 6-8
3. In method section of the abstract briefly mention from what records you have collected retrospective data and for what duration of period.	We specified this in the method section of the abstract.	Lines 10-11 Lines 14-15
Introduction		
4. The introduction is useful; however, it might be briefer. Consider reducing background information to make it more focused.	We have critically reread the introduction and concluded that we believe that the information that has	

	now been given is of added value for the explanation of the knowledge gaps. In addition, another reviewer asked to briefly mention the mechanism of action of TcPRF in the introduction, so the introduction has been slightly expanded.	
Methods		
5. In method section elaborate how retrospective data extraction was done. In one year time duration how 37 patients incorporated in study, show it in flow chart.	A chart review was added.	Line 89-90 + Figure 1 (line 410).
6. In method section, describe procedure in sufficient detail.	See subheading procedure (line 95)	Line 95-103
7. Is the study single blinded or double blinded and if it is how it was done.	See line 86	Line 86
Discussion/ Conclusion		
8. In Discussion part, try to compare more previous studies with yours.	Although there are more papers available with regard to the use of pulsed radiofrequency treatments, the use of this specific type of PRF is not yet widely applicated and as such not widely reported on. We feel that for relevant and valid comparisons the mentioned papers are most fit and have purposefully excluded the other available papers that we deem to be a risk for introducing bias. Should the reviewers and editor nevertheless	

	require that we reintroduce these papers, we are of course open for discussion about it.	
9. The conclusion should be written under separate heading after discussion part.	We added a separate conclusion heading after the discussion part.	Line 295
References		
10. References should not be more than 5 years old.	We completely understand this point that was raised by the reviewer, since this usually results in the most relevant up-to-date support for the authors viewpoints. However, in this specific case it leads to the problem that – although on the wider general subject of PRF there's ample literature available, this specific type of treatment as studied in this paper has only come to be available for caregivers very recently. Although – as we mentioned before we are weary of introducing papers in our paper that are a risk for introduction of bias when using for comparison with the current treatment, we believe that knowing some of the historical starting points, which are well described in the older papers merit their mentioning in this paper to provide proper and usefull context for the reader to understand how we've come to arrive at this point.	

	We hope that this clarifies the use of these papers adequately.	
Remarks	**Authors' Responses**	**Text Changes**
Reviewer #4: *Dear AE,* *The research article provides valuable insights into the effectiveness and safety of TcPRF treatment for osteoarthritis of the upper extremity. The study is well-conducted and the findings are clearly presented. With the minor corrections suggested, it will be a strong addition to the field:*		
The abstract provides a clear overview of the study's objectives, methods, results, and conclusions. However, it lacks specific data on effect sizes for all measurements, and could be enhanced by summarizing the main findings more concisely. It could also be strengthened by adding the numerical values of effect sizes in the conclusion.	The effect sizes and their numerical values as mentioned in the results section are added to the results part of the abstract.	Lines 19-20, 22-23
Some sentences lack references. All sentences quoted from other articles must have references at the end of themselves.	We have critically reread the article and concluded that it seems that some sentences lack references. However, the references are put at the end of the upcoming sentence, for example: *Pain frequently leads to sick leave, resulting in a socioeconomic impact on our community. Besides work-related problems, people with upper extremity pain also* experience limitations in *daily life activities (e.g., dressing, carrying bags) (10-14)*. The first sentence also belongs to the references (10-14).	
The methods section is well-structured and provides a clear understanding of the	The procedure subheading describes	Lines 95-103

study's design, the population studied, and the interventions involved. However, the detailed parameters of the TcPRF procedure, such as the frequency of the pulses, could be included for better clarity.	the detailed parameters of the TcPRF procedure (see lines 95-103).	

2 Revision 1

6 comments · 11 Jun 2024 – 19 Jun 2024

Referee 1 Reviewer — ACCEPT 11 Jun 2024

The corrections were acceptable, and your manuscript was accepted.

Referee 4 Reviewer — ACCEPT 13 Jun 2024

Dear AE.
Previous errors have been corrected, and there are no further recommendations.

Referee 2 Reviewer — ACCEPT 14 Jun 2024

Accepted after correcting grammatical errors, if any.

Referee 3 Reviewer — ACCEPT 17 Jun 2024

I was pleased to have the opportunity to review the manuscript entitled 'Transcutaneous Pulsed Radiofrequency treatment in patients with osteoarthritis of the upper extremity'. I acknowledge the effort of the authors to improve their manuscript. Despite the study limitations, particularly the retrospective design and small sample size, I believe it merits publication.

Associate Editor — ACCEPT 19 Jun 2024

Dear EIC.
Previous errors have been corrected, and there are no further recommendations.

Editor-in-Chief — ACCEPT 19 Jun 2024

Dear Authors,
Thank you for paying attention and responding to the reviewer's comments.