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OPEN PEER REVIEW

Comparative Evaluation of Caudal Epidural Method to Ultrasound-Guided S1 Transforamen Block in Patient's Lumbar Discectomy with Failed Back Syndrome Symptoms: A Double-Blind Clinical Trial

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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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Contents

1 **Original submission** Referee 1, Referee 2, Associate Editor, Editor-in-Chief 2
2 **Revision 1** Referee 2, Associate Editor, Editor-in-Chief 4
Authors' reply to reviewers 5
Reviewer and editor comments 8
3 **Revision 2** Associate Editor, Editor-in-Chief 9
Authors' reply to reviewers 10
Reviewer and editor comments 11

1 Original submission

4 comments · 26 May 2023 – 4 Jun 2023

Referee 1 Reviewer

ACCEPT 26 May 2023

Dear Author

Thank you for this effort. The concept and work were good and practical. I suggest two points as follows:

1- Some references are old, and it would be better to replace them. (11, 12, 15, 24)
2- Add a CONSORT diagram to the article.

With best regard

Referee 2 Reviewer

MAJOR REVISION 1 Jun 2023

Hi, thanks for your invite.
My opinions are as follows:
1. In the title, the guidance used to perform the procedure was not specified.
2. In the abstract, S1 TFESI should first be written out in full, then abbreviated.
3. In the abstract, the background section is too long.
4. In the abstract, the methods section is too short and incomplete.
5. In the abstract's results section, the first 3 lines repeat information in the methods section and should be deleted.
6. In the abstract's methods section, the guidance used to perform the procedure was not specified.
7. "And" should be deleted from the keywords.
8. In line 86, what does "EF" mean?
9. In line 88, is NRS < 4 as an inclusion criterion correct?
10. In line 89, please explain more than 2 levels as an exclusion criterion; the number of levels should be stated clearly.
11. Please add ultrasound views of CESI and S1 TFESI to the methods section (surgical procedure).
12. In line 128, the patient was ... on his back, "her" should be added.
13. In the methods section, the TFESI procedure should be explained clearly. Did you perform it with the patient in the supine position? Is that correct?
14. In the results section, lines 162- 166, the number should be corrected and edited again.
15. In table-1, under variable, OSDIN should be corrected.
16. Table-2 should be revised and interpreted more clearly.
17. In line 175, " the average NRS... increased with time", is this correct?
18. The results section is too incomplete and needs to be revised, edited again, and explained more clearly.
19. In the discussion section, line 206 should be corrected ("although not statistically significant " is repeated 2 times).
20. The references should be edited again (no. 1,2,3,4,5,6,10,12,23, and 26).

Associate Editor

MAJOR REVISION 4 Jun 2023

Dear EIC,
Thanks and appreciation to the authors and researchers. The manuscript is a valuable piece of research. But

some revisions are needed. The authors should revise it based on the comments. Also, a minor change should be made in the abstract:
- Please mention the study design in the first line of the method section of the ABSTRACT.

Editor-in-Chief MAJOR REVISION 4 Jun 2023

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

2

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.

Reviewers' Comments:

Reviewer 1:
Dear Author

Thank you for this effort. The concept and work was good and practical. . I just suggested two points as follows:

1- Some references are old and it is better to replace them. (11, 12, 15, 24)
2- Add a consort diagram to the article.

With best regard
Reviewer 2:
Hi, thanks for your invite.
My opinions are as follows:
1. In the title, the guidance for procedure performance was not denoted.
2. In abstract, S1 TFESI should be explained firstly,then mentioned as mnemonic.
3. In abstract, background part is too long.
4. In abstract, method part is too short and imperfect.
5. In abstract, result part, first 3 lines ,were mentioned in method and should be deleted.
6. In abstract, method part, the guidance for procedure performance was not denoted.
7. "And" should be deleted from keywords.
8. In line 86, what does "EF" mean?
9. In line 88, NRS < 4 as an inclusion criteria..., is it correct?
10. In line 89, ... more than 2 level as an exclusion criteria, please explain it, the number of level should be mentioned obviously.
11. Please add ultrasound View of CESI and S1 TFESI to method part (surgical procedure).
12. In line 128, the patient was ... on his back, "her" should be added.
13. In method part, procedure of TFESI should be explained clearly, did you perform on supine position? Is it true?
14. In results part, line 162- 166 ,the number should be corrected and edited again.
15. In table-1 , variable, OSDIN should be corrected.
16. Table-2 should be revised and interpreted more clearly.
17. In line 175, " the average NRS... increased with time", is it true?
18. The results part is too imperfect and need to be revised and edited again and explain more clearly.
19. In discussion part, line 206 should be corrected ("although not statistically significant " repeated 2 times).
20. The references should be edited again (no. 1,2,3,4,5,6,10,12,23, and 26).

> Associate Editor's Comments:

Associate Editor 1:
Dear EIC,

Thanks to the authors and appreciation to the researchers. The manuscript is a valuable research. But some revisions are needed. Authors should revise it based on comments. Also minor change should be done in abstract:
-Please mention study design in first line of method section of ABSTRACT.

Reviewer 1 :

1. Dear reviewer, old references were replaced with new ones.
2. Thanks for the precious comment, the consort flowchart was added as requested.

Reviewer2:

1. Thanks a lot, the exact word of " ultrasound-guided" was mentioned in the title.
2. The full term of *S1 TFESI was mentioned in abstract.*
3. As requested, the background was shorten.
4. Gratitude for the precise comment, as requested, the method part was written in more details.
5. The mentioned part of result was deleted.
6. Dear reviewer the part "A linear transducer with a curve at a low frequency (2–5 MHz) was used to visualize the area. An aseptically prepared puncture site was used to insert a 2- to 5-MHz curved ultrasound probe with ultrasound gel to identify the articular processes of the lower lumbar vertebrae and the posterior sacral surface. The probe was then positioned longitudinally to the para-sacral area, about 2 cm lateral to the midline. The articular process represents the L5/S1 level at the farthest caudal side, and the S1 posterior sacral foramen is represented by the concavity at the posterior sacral surface that is somewhat caudal. The probe was angled caudally to provide enough room for the needle to enter the S1 foramen. The injection site for the needle tip was the s1 foramen." Was added to the abstract to denote the guidance and show its exact process.
7. "AND" was deleted from key words.
8.
9. The compelet form of EF was mentioned prior to the abbreviation.
10. The number of excat levels was added "Previous surgery for more than 2 level disc herniation, on the basis of description as neurosurgen in last lumbar fusion surgery."
11. The requested figures were added as figure1 and 2.
12. The change wad done.

13. Through explanation was provided.
14. All the numbers in result section were edited.
15. In table 1 the variable were corrected.
16. Table 2 was edited and explained.
17. The mentioned sentence was edited as follow” The average NRS scores in both groups declined with time, which was statistically significant. (P > 0.001). Despite equal baseline NRS ratings, the CESI group had statistically significantly lower mean NRS scores at one week and one month (P 0.001)”
18. The result section was edited thoroughly.
19. The sentence was edited.
20. References were edited.

Associate editor’s comment

The type of study was added to the first line of method in abstract part.

2 Revision 1

3 comments · 3 Nov 2023 – 4 Nov 2023

Referee 2 Reviewer

MINOR REVISION 3 Nov 2023

Hi, thanks for your valuable study.
I read the reviewers' comments. All of them were addressed except those concerning the references. The references mentioned in the reviewers' comments should be revised again. The references mentioned in the reviewers' comments should be edited and organized again according to the reference formatting guidelines. The years of the mentioned references should be moved to the correct and precise locations. You placed them in improper locations.
Best regards

Associate Editor

MAJOR REVISION 4 Nov 2023

Dear EIC,
The great effort in improving the manuscript is highly appreciated. However, there are a few areas for further improvement that the authors should consider.

Editor-in-Chief

MAJOR REVISION 4 Nov 2023

Dear EIC,
The great effort in improving the manuscript is highly appreciated. However, there are a few areas for further improvement which the authors should consider.

3

Revision 2

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.

Response to reviewer

Dear reviewers

Thanks for the precise comments. The references were edited based on the author guideline (Vancouver briefland style).

3 Revision 2

2 comments · 28 Nov 2023 – 29 Nov 2023

Associate Editor

ACCEPT 28 Nov 2023

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

Editor-in-Chief

ACCEPT 29 Nov 2023

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