

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Stem Cells

**Manuscript NO:** 61414

**Title:** A Review of Operative Considerations in Spinal Cord Stem Cell Therapy

**Reviewer's code:** 05191122

**Position:** Peer Reviewer

**Academic degree:** DSc, PhD

**Professional title:** Full Professor

**Reviewer's Country/Territory:** Poland

**Author's Country/Territory:** United States

**Manuscript submission date:** 2020-12-11

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2020-12-12 11:32

**Reviewer performed review:** 2020-12-17 21:51

**Review time:** 5 Days and 10 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input checked="" type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## **SPECIFIC COMMENTS TO AUTHORS**

This review analyze efficacy of operative techniques and technical considerations of stem cells delivery for treatment of spinal cord injury (SCI) performed in phase I/II of clinical trials. The Authors state that 38 papers from PubMed meet the criteria for clinical trials selected for “spinal cord injury” and “stem cell”, and that these articles included all published results from the active and completed clinical trials. However, the Table 1 summarize results from only 14 papers. Functional improvement was observed when intervention was performed in the acute to subacute treatment phase and when multiple stem cells injections were utilized. There is a lack of information on biological properties of MSCs injected. Applied MSCs were isolated from different tissue sources, this also have an impact on the desired regenerative response. For effective SCI treatment, important role plays not only operative technique and routes of MSCs delivery but also tissue source and biological properties of MSCs. This issue need to be discuss. How functional assessment was performed? In analyzed clinical trials reported improvements in ASIA scores and motor function, was this performed at the similar time-point after MSCs injection? How long the patients were observed? This manuscript is superficial and do not fully reflect the aim of this review. The Core Tip do not summarize presented analysis, need to be improved.

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Stem Cells

**Manuscript NO:** 61414

**Title:** A Review of Operative Considerations in Spinal Cord Stem Cell Therapy

**Reviewer's code:** 03531468

**Position:** Peer Reviewer

**Academic degree:** MD

**Professional title:** Doctor

**Reviewer's Country/Territory:** United States

**Author's Country/Territory:** United States

**Manuscript submission date:** 2020-12-11

**Reviewer chosen by:** AI Technique

**Reviewer accepted review:** 2020-12-11 17:09

**Reviewer performed review:** 2020-12-18 16:13

**Review time:** 6 Days and 23 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

#### **SPECIFIC COMMENTS TO AUTHORS**

This is a well written summary of the available literature on stem cell transplantation in human clinical trials. My one concern lies in your recommendation that debridement of the scar tissue may be beneficial to the ultimate outcome. Although one clinical trial suggested this as a possibility, most animal data shows worsening of neurologic condition. This should at least be discussed.

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Stem Cells

**Manuscript NO:** 61414

**Title:** A Review of Operative Considerations in Spinal Cord Stem Cell Therapy

**Reviewer's code:** 00742435

**Position:** Editorial Board

**Academic degree:** PhD

**Professional title:** Director, Professor

**Reviewer's Country/Territory:** Qatar

**Author's Country/Territory:** United States

**Manuscript submission date:** 2020-12-11

**Reviewer chosen by:** Li Ma

**Reviewer accepted review:** 2020-12-16 22:00

**Reviewer performed review:** 2020-12-22 06:25

**Review time:** 5 Days and 8 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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#### **SPECIFIC COMMENTS TO AUTHORS**

Good systematic review on spinal injuries and therapy

## PEER-REVIEW REPORT

**Name of journal:** World Journal of Stem Cells

**Manuscript NO:** 61414

**Title:** A Review of Operative Considerations in Spinal Cord Stem Cell Therapy

**Reviewer's code:** 03812467

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Research Fellow

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** United States

**Manuscript submission date:** 2020-12-11

**Reviewer chosen by:** Li Ma

**Reviewer accepted review:** 2020-12-14 03:03

**Reviewer performed review:** 2020-12-24 08:52

**Review time:** 10 Days and 5 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Re-review</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No



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#### **SPECIFIC COMMENTS TO AUTHORS**

This review is based on 38 articles in the clinical trials of stem cell treatment of spinal cord injury. The evaluation and review of "Operative Considerations in Spinal Cord Stem Cell Therapy" in terms of treatment time, administration method, and number of treatments are carried out. And it suggests that longer treatment paradigms soon after injury may be most beneficial. The conclusions of the review can provide scientific data support for further clinical research, but in some aspects, there are still some problems. This article is short in length. Although it can clearly show the key analysis content, many details have not been specifically explained and discussed. The description is not complete. It is recommended that the description of the number of cells injected, the effects of the acute, subacute and chronic phases of SCI, and the time when cell therapy begins to intervene is to be complete, or some possible analysis reasons can be added.



## RE-REVIEW REPORT OF REVISED MANUSCRIPT

**Name of journal:** World Journal of Stem Cells

**Manuscript NO:** 61414

**Title:** A Review of Operative Considerations in Spinal Cord Stem Cell Therapy

**Reviewer's code:** 03812467

**Position:** Peer Reviewer

**Academic degree:** PhD

**Professional title:** Research Fellow

**Reviewer's Country/Territory:** China

**Author's Country/Territory:** United States

**Manuscript submission date:** 2020-12-11

**Reviewer chosen by:** Jia-Ru Fan

**Reviewer accepted review:** 2021-01-19 11:44

**Reviewer performed review:** 2021-01-19 11:58

**Review time:** 1 Hour

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## SPECIFIC COMMENTS TO AUTHORS

This revised manuscript is now acceptable for publishing.

## RE-REVIEW REPORT OF REVISED MANUSCRIPT

**Name of journal:** World Journal of Stem Cells

**Manuscript NO:** 61414

**Title:** A Review of Operative Considerations in Spinal Cord Stem Cell Therapy

**Reviewer's code:** 00742435

**Position:** Editorial Board

**Academic degree:** PhD

**Professional title:** Director, Professor

**Reviewer's Country/Territory:** Qatar

**Author's Country/Territory:** United States

**Manuscript submission date:** 2020-12-11

**Reviewer chosen by:** Jia-Ru Fan

**Reviewer accepted review:** 2021-01-19 11:04

**Reviewer performed review:** 2021-01-19 13:13

**Review time:** 2 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## SPECIFIC COMMENTS TO AUTHORS

The authors have addressed the concerns raised by the reviewers and the manuscript



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can be accepted.

## RE-REVIEW REPORT OF REVISED MANUSCRIPT

**Name of journal:** World Journal of Stem Cells

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**Reviewer's code:** 05191122

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**Academic degree:** DSc, PhD

**Professional title:** Full Professor

**Reviewer's Country/Territory:** Poland

**Author's Country/Territory:** United States

**Manuscript submission date:** 2020-12-11

**Reviewer chosen by:** Jia-Ru Fan

**Reviewer accepted review:** 2021-01-20 11:06

**Reviewer performed review:** 2021-01-22 09:08

**Review time:** 1 Day and 22 Hours

<b>Scientific quality</b>	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
<b>Language quality</b>	<input checked="" type="checkbox"/> Grade A: Priority publishing <input type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
<b>Conclusion</b>	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
<b>Peer-reviewer statements</b>	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## SPECIFIC COMMENTS TO AUTHORS

I accept it as it is.