

PEER-REVIEW REPORT

Name of journal: *World Journal of Orthopedics*

Manuscript NO: 85447

Title: Formation Process of Extension Knee Joint Contracture Following External Immobilization in Rats

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 04168227

Position: Editorial Board

Academic degree: BPhy, DPhil, PhD

Professional title: Associate Professor

Reviewer's Country/Territory: Saudi Arabia

Author's Country/Territory: China

Manuscript submission date: 2023-04-27

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-05-21 16:59

Reviewer performed review: 2023-05-25 17:08

Review time: 4 Days

Scientific quality	<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 Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Good <input checked="" type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
Language quality	<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
Conclusion	<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
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	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

Dear Authors Thanks a lot for the opportunity you have offered me to revise the fascinating manuscript " Formation Process of Extending Knee Joint Contracture Following External Immobilization in Rats.". I thank the authors for their effort in producing this exciting manuscript. From the editing point of view, I recommend the authors to fully respect the editing requirements imposed by this scientific journal and clearly indicated in the template. More specifically, I mean: the number of words in the abstract and manuscript, the number of keywords and the way to indicate the bibliographic sources. As a significant strength, This proposal is a novelty in the field and adds information to the existing evidence in the literature produced in the field. As a major weakness, The manuscript sometimes lacks details and clarity concerning methodological steps that would help improve the understanding of the manuscript. Therefore, I have suggested some strategies to improve authors' reporting and increase the quality of their work (e.g., rationale/background, methods and discussion of the manuscript). Overall, my peer-review is a major revision: I suggest revising the manuscript to improve the pitfalls presented. The final goal is to improve the overall

clarity of the message to help the reader understand this fundamental topic. Keywords: use MeSH keywords Title: The title of the study is not clear – add the type of study.

Abstract: 1. Make the abstract with sub-titles. 2. Mention the study design, study duration and study setting. 3. Mention the character of the rats. 4. Mention the treatment procedure in short. 5. Mention the statistical tests used for the study. 6.

Mention the reports with 95% CI with upper and lower limits and its p score. 7.

The conclusion should be drawn on the basis of the study reports, not on an assumption. Manuscript 8. Mention in detail about knee extension contracture, its causes, adverse effects in human body. 9. Mention the gaps monitored by the researcher in the previous studies. 10. Include the clinical significance of this study over clinicians, patients, and researchers. 11. Mention the manufacture details of the splint used to immobilize the limb. 12. Mention the outcome measures measured in the study and its reliability and validity. 13. The mentioned statistical tests are not apt to this study. 14. Present the reports with 95%CI with upper and lower limits for all outcome variables. 15. Mention the MCID and effect size of each variable. 16. Mention in detail and its mechanism how immobilization changes the outcome variables in these rats? 17. The conclusion should be more concise and self-explanatory and drawn on the basis of study reports. I look forward to reading the revised version of the manuscript. Thanks again, and good luck with researching in this challenging time.

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Peer-review model: Single blind

Reviewer's code: 04083095

Position: Peer Reviewer

Academic degree: Doctor

Professional title: Research Scientist

Reviewer's Country/Territory: Russia

Author's Country/Territory: China

Manuscript submission date: 2023-04-27

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-05-29 09:39

Reviewer performed review: 2023-05-31 08:08

Review time: 1 Day and 22 Hours

Scientific quality	<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
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
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Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	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

Dear authors, your work is interesting but needs corrections and further study on the recovery of the knee function after the removal of the fixator. It is very relevant for clinical situations in external fixation.

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Peer-review model: Single blind

Reviewer's code: 03999237

Position: Peer Reviewer

Academic degree: MS

Professional title: Professor

Reviewer's Country/Territory: India

Author's Country/Territory: China

Manuscript submission date: 2023-04-27

Reviewer chosen by: Geng-Long Liu

Reviewer accepted review: 2023-05-28 01:33

Reviewer performed review: 2023-06-14 03:28

Review time: 17 Days and 1 Hour

Scientific quality	<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
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Re-review	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Peer-reviewer statements	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

Good study design Adequate numbers Materials and methods well done described
 Good analysis of the data Well done procedure and analysis of the muscle
 /histology Line 96-97 sponge used to prevent excessive immobilisation –
 please clarify – sponge used for appropriate padding/ achieve subtle change in position

The conclusion has been well written and could include this reference stating the
 information available regarding remobilization Review Physiol Res. 2022 Aug
 31;71(4):447-488. doi: 10.33549/physiolres.934876. Epub 2022 Jun 30. Inflammation and
 Fibrosis Induced by Joint Remobilization, and Relevance to Progression of Arthrogenic
 Joint Contracture: A Narrative Review A Kaneguchi 1, J Ozawa The paper has been
 well written and can be considered after minor revision.

RE-REVIEW REPORT OF REVISED MANUSCRIPT

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Peer-review model: Single blind

Reviewer's code: 04083095

Position: Peer Reviewer

Academic degree: Doctor

Professional title: Research Scientist

Reviewer's Country/Territory: Russia

Author's Country/Territory: China

Manuscript submission date: 2023-04-27

Reviewer chosen by: Xin-Liang Qu

Reviewer accepted review: 2023-07-03 04:21

Reviewer performed review: 2023-07-04 06:00

Review time: 1 Day and 1 Hour

Scientific quality	<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
Language quality	<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
Conclusion	<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
Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous

statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

Dear authors, The manuscript was much improved but still I see the inconsistencies. Abstract and Introduction present the aim of the study. But conclusions are different in the Abstract and Main text. Abstract AIM The study aimed to elucidate the formation process of knee extension contracture. CONCLUSION This rat model may be a useful tool to study the etiology of joint contracture and establish therapeutic approaches. Main text In the present study, we aimed to study the process of knee extension contracture formation during external fixation of the knee in a straightened position in a developed by us rat model. CONCLUSION The results in this study suggested that myogenic contracture was stabilized after 2 wk, while arthrogenic contracture was stabilized after 3 wk. I would not write wk instead of weeks. The conclusion should express what was found not suggested. Discussion At the end of discussion the following abstract sound clumsy. Finally, The article did not further discuss that after the formation of contracture, the external fixation was removed, the rats were allowed to move freely, and the self improvement of the degree of contracture was observed, which will be studied in the next experiment. May be better to express the point like this: The state of the extension contracture after the removal of the external fixator was also studied and will be reported. Or omit it. FIGURE 5. (A) Morphological changes of the anterior joint capsule. (B) Forward joint capsule thickness value, *P < 0.05, **P < 0.01, ***P < 0.001, ****P < 0.0001 vs, control group What is forward???? Key words: I would put extension contracture as a key word to specify what kind of contracture was studied.

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Reviewer's Country/Territory: Saudi Arabia

Author's Country/Territory: China

Manuscript submission date: 2023-04-27

Reviewer chosen by: Xin-Liang Qu

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Reviewer performed review: 2023-07-04 23:16

Review time: 1 Hour

Scientific quality	<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
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Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous



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statements

Conflicts-of-Interest: [☐] Yes [☒] No

SPECIFIC COMMENTS TO AUTHORS

Dear authors, I appreciate all your efforts to address my comments in a very positive manner. Now the article is enough potential to be published in its current state. I wish the best of luck for future research. Regards