

PEER-REVIEW REPORT

Name of journal: World Journal of Clinical Cases

Manuscript NO: 55902

Title: Treatment of Kümmell's disease with sequential infusion of bone cement: A retrospective study

Reviewer's code: 02456959

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Full Professor, Professor

Reviewer's Country/Territory: China

Author's Country/Territory: China

Manuscript submission date: 2020-04-10

Reviewer chosen by: Jin-Lei Wang

Reviewer accepted review: 2020-09-18 00:49

Reviewer performed review: 2020-09-19 04:42

Review time: 1 Day and 3 Hours

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|---------------------------------|---|
| 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 Grade E: Do not publish |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 type="checkbox"/> Grade B: Minor language polishing <input checked="" 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

Kümmell's disease is a syndrome following compression fracture of a vertebra that involves spinal pain, intercostal neuralgia, and motor disturbances of the legs, and the patients with low back pain can be treated by percutaneous vertebroplasty (PVP) or percutaneous kyphoplasty (PKP). However, the intraoperative bone cement leakage into blood vessels or spinal canal can cause pulmonary artery embolism or death or severe pain or paralysis. This work reported here performed a retrospective study to evaluate the effect of sequential infusion of bone cement during PVP on reducing bone cement leakage. Forty-five patients included in this study, 24 in the single infusion group and 21 in the sequential infusion group. Data indicated that there are no significant differences in VAS score and ODI between the single infusion group and the sequential infusion group; however, the leakage rate of bone cement was lower in the sequential infusion group than that in the single infusion group (Pearson chi-squared test, $P=0.043$). Because the sample size of this study was small, the effect of sequential infusion on reducing bone cement leakage should be evaluated by large sample size randomized controlled studies. The manuscript (No. 55902) reported here that "Treatment of Kümmell's Disease with Sequential Infusion of Bone Cement: A Retrospective Study". It is suggested that sequential infusion may be useful to reduce bone cement leakage and will be helpful for improving patients' prognosis or outcome. While the result is interesting, I have the following comments and suggestions for the authors: 1. Please add the abstract, which was missed. 2. On section of methods, the method used to group the patients needs to be stated clearly. 3. On section of results, "24 in the single infusion group and 21 in the sequential infusion group" should be replaced by "24 in TSI group and 21 in SI group". "2 cases of basivertebral" should be replaced by "2 cases of basivertebral". "The leakage rate of bone cement was significantly lower (Pearson chi-squared test, $P=0.043$)"



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should be replaced by “The leakage rate of bone cement was lowerP (Pearson chi-squared test, $P=0.043$)”. 4. On the section of discussion, it is recommended to focus on the relationship between “sequential infusion” and “reduce bone cement leakage”, and their clinical significances. 5. The Table, Figure, Reference, and special symbols must fit the journal's requirements or format. 6. The quality of logic and presentation of the key idea are not good. Please delete the duplicate, meaningless and lengthy text descriptions. Please carefully check the spaces, punctuation, spelling of letters, and correct the mistakes. 7. Minor issues: Table 1, should added “TSI: traditional single infusion; SI: sequential infusion”. Table 2, “oswestrydisability index” should be replaced by “oswestry disability index”.

PEER-REVIEW REPORT

Name of journal: World Journal of Clinical Cases

Manuscript NO: 55902

Title: Treatment of Kümmell's disease with sequential infusion of bone cement: A retrospective study

Reviewer's code: 00058381

Position: Editorial Board

Academic degree: MD

Professional title: Professor

Reviewer's Country/Territory: Austria

Author's Country/Territory: China

Manuscript submission date: 2020-04-10

Reviewer chosen by: Jin-Lei Wang

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Reviewer performed review: 2020-09-20 09:35

Review time: 15 Hours

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|---------------------------------|---|
| Scientific quality | <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 |
| 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 |
| 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

Overall comments: This manuscript deals with the treatment of Kümmell's disease with sequential infusion of bone cement. Drawbacks of the presented study include the retrospective design, small sample size and short follow-up period. As stated in the section "Research perspectives", the role of sequential infusion in reducing the leakage of bone cement will have to be evaluated in a large sample multicenter randomized controlled study. Specific comments: Discussion, paragraph 1: "However, that the most popular hypothesis is that Kümmell's disease is caused by ischemic necrosis of the vertebral body." – This sentence is unclear. Discussion paragraph 2: "As a result, because of gravity and the shearing force of spinal flexion-extension, the wedge change in the vertebral body with kyphosis occur." – Please correct this sentence. Paragraph 1 and paragraph 2 of the discussion should be shortened, as they present general knowledge and do not discuss the presented results. Methods, paragraph 1: "WTO" - please write out this abbreviated term. Section "Postoperative outcomes": "oswestry disability index" -> Oswestry Disability Index (consistent with table 2, footnote) Please check the reference list once more; e.g., reference 12: ssimakopoulos -> Assimakopoulos; this article is in Hell J Nucl Med. 2011;14(3): 291-299 (not in Hell J Nucl Med. 2010;14(3): 291-299); reference 13: vacuunm -> vacuum.

RE-REVIEW REPORT OF REVISED MANUSCRIPT

Name of journal: World Journal of Clinical Cases

Manuscript NO: 55902

Title: Treatment of Kümmell's disease with sequential infusion of bone cement: A retrospective study

Reviewer's code: 02456959

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Full Professor, Professor

Reviewer's Country/Territory: China

Author's Country/Territory: China

Manuscript submission date: 2020-04-10

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Review time: 3 Hours

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|---------------------------------|---|
| 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 checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection |
| 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



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The revision of manuscript (No. 55902R) is much better now. However, I have following concerns: 1. There are many minor errors needs corrected. For example, “in theTSI group (41.7%, 10 of 24).C” should be replaced by “in the TSI group (41.7%, 10 of 24).”; “analyzedretrospectively” should be replaced by “analyzed retrospectively.”; “Met the diagnostic criteria” should be replaced by “Meet the diagnostic criteria”, and so on. 2. Please check the full text carefully and correct any errors. 3. Statistical analysis needs to be reviewed by a statistician, sentences and grammar need to be revised by native English speakers.