Author's response to reviews

Title: Open reduction and closed reduction internal fixation in treatment of femoral neck fractures: a meta-analysis

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Author's response to reviews: see over
Dear editors,

The manuscript entitled "Open reduction and closed reduction internal fixation in treatment of femoral neck fractures: a meta-analysis" (MS: 2056948666110241) has been revised. The authors would like to thank reviewers and editors for their careful review of our manuscript. Their comments and suggestions are all of great importance for us to improve the quality of the manuscript. We have substantially revised the manuscript closely according to your kind suggestion. The point-by-point responses to the concerns are listed below. We would like to re-submit this revised manuscript to "BMC Musculoskeletal Disorders" and hope it is acceptable for publication in the journal. Please do not hesitate to contact us with additional questions.

Yours sincerely,
Zhanwang Xu

Editorial Requirements:

1. By way of a section ?Acknowledgements?, please acknowledge anyone who contributed towards the article by making substantial contributions to conception, design, acquisition of data, or analysis and interpretation of data, or who was involved in drafting the manuscript or revising it critically for important intellectual content, but who does not meet the criteria for authorship. Please also include the source(s) of funding for each author, and for the manuscript preparation. Authors must describe the role of the funding body, if any, in design, in the collection, analysis, and interpretation of data; in the writing of the manuscript; and in the decision to submit the manuscript for publication. Please also acknowledge anyone who contributed materials essential for the study. If a language editor has made significant revision of the manuscript, we recommend that you acknowledge the editor by name, where possible.

The role of a scientific (medical) writer must be included in the acknowledgements section, including their source(s) of funding. We suggest wording such as 'We thank Jane Doe who provided medical writing services on behalf of XYZ Pharmaceuticals Ltd.'
Authors should obtain permission to acknowledge from all those mentioned in the Acknowledgements section.

Response: thank you very much for your kind suggestions. We have added the acknowledgements section as follows: “”

2. PRISMA guidelines

In accordance with BioMed Central editorial policies (http://www.biomedcentral.com/about/editorialpolicies#StandardsofReporting), could you please ensure your manuscript reporting adheres to PRISMA guidelines (http://www.prisma-statement.org/) for reporting systematic reviews. This is so your methodology can be fully evaluated and utilised. Can you please include a completed PRISMA checklist as an additional file when submitting your revised manuscript.

Response: thank you very much for your kind suggestions. We reported our study adhering to PRISMA guidelines and the PRISMA checklist has been submitted.

Reviewer's report:

Reviewer: sda sda

1. The author should present which database and the deadline of literature retrieval in the Abstract.

Response: we have added the deadline of September 10, 2013 in the abstract.

2. All abbreviations should be stated their full name at the first place. For example, what is “AVN” means in the Abstract? And “OR” in the main text, etc.

Response: thanks for your kind suggestion. We have defined all the abbreviations in the abstract and the main text when mentioned for the first time, for example, AVN, OR, CI, ORIF and CRIF.

3. In the introduction, the author stated that “It contains open reduction internal fixation and closed reduction internal fixation. Both of the two methods have their advantages and disadvantages.” Please detail their advantages and disadvantages.
Response: thanks very much for your suggestion. The advantages and disadvantages were all detailed in introduction, as follows: ” Although ORIF has advantages of direct look, decreased pain, and restoration of normal function, its application still limited by the negative effects of nerve damage, swelling, incomplete healing of the bone, increased pressure and blood clot [7]. CRIF has advantages of avoiding injury to the medial circumflex femoral artery [8]. However, intracapsular pressure formed by CRIF compromised femoral head circulation, and prolonged extension and internal rotation position on the fracture table reduced the blood supply to the femoral head, what’s more, the repeated forceful manipulation increased the risk of AVN [6].”

4. In the manuscript, “The heterogeneity between studies was examined by X^2-based Q statistic.” Please provide the reference of Q statistic. Why didn’t you perform I^2 test to calculate heterogeneity? “If significant heterogeneity existed between studies…” How did you define significant heterogeneity between studies? What if significant heterogeneity not exist?
Response: thanks for your kind suggestion. We performed heterogeneity test (Q statistic) according to the previous study of Cochran [1]. The reference was added in the text. I^2 test was also used, and the result of which were also showed in the figures (I^2=0.0%). In addition, “the p value of Q statistic less than 0.05 and/or I^2 more than 50% was considered significantly heterogeneous, otherwise there was no significant heterogeneity”, which was also added in the manuscript.

5. What is the limitation of your meta-analysis?
Response: thanks for your kind suggestion. We have added the limitations in discussion, as follows:
” There were several limitations in the present meta-analysis that should be noted. First, publication bias, an inherent limitation of all meta-analyses, may still exist because researchers are less likely to publish negative findings, although Egger’s regression analysis did not suggest publication bias in this study. Second, the
confounding variables (age, sex, smoking, or alcohol intake) were not adjusted because most of studies didn't provide respective OR value or sufficient data for calculating OR. Besides, different types of reduction devices may affect the results. Third, we did not perform subgroup analysis for different type of femoral neck fracture because the classifications varied from different studies including Garden [34], Pauwels [35] and Delbet [36] classification. Despite these limitations, the study is still of great importance for evaluating the effects of two reductions for femoral neck fracture treatment, especially considering the main complication – AVN.”

6. There are many grammatical and spelling errors. The manuscript should be checked by a native speaker.

Response: thank you very much for your kind suggestion. We have carefully revised the whole manuscript and tried to avoid any grammar or spelling error. In addition, we have asked some colleagues who are well-versed in English to check the language. We hope that the language is now acceptable for the next review process.

Reference


Reviewer: Cemil Kayali

1. AVN rate of open reduction group: 43/478=8.9% " " closed reduction group: 71/505=14%. The authors should explain; how could they say "In conclusion risk of AVN of femoral head was significant higher after open reduction compared with closed reduction”.

Response: thanks for your careful review. We reanalyzed the data. As you mentioned above, the result showed that we reversed the groups of "open reduction" and “closed reduction” in the results of AVN. We have to apologize for the clerical mistake. The accordance descriptions were all corrected in the revised manuscript.