Reviewer’s report
Title: Distribution of ossified spinal lesions in patients with severe ossification of the posterior longitudinal ligament and prediction of ossification at each segment based on the cervical OP index classification: A multicenter study (JOSL CT study)

Version: 0 Date: 07 Feb 2018

Reviewer: Adham Castro

Reviewer's report:
Congratulations on the manuscript. I’ll comment and make my review according to each topic.

Abstract:
Please, add on the conclusion the main results (to answer the purpose of the study).

Introduction:
You used the word "however" in line 224 and 228. Please, replace one of them for another synonymous word.

Methods:
The WHO definition for adult is a person older than 19 years of age; for adolescent is a person who falls into the 10 to 19 years of age. What was the criteria for excluding people younger than 15 years of age?
Patients who had undergone anterior decompression surgery for OPLL were excluded; and what about another cervical spine surgeries? Were them also excluded? (Did at least one patient had undergone another cervical surgery?).
Line 240: "Four hundred and fifty-six patients with OPLL were identified, of whom only 322 had full clinical, demographic, and anthropometric data available for analysis". How was this identification made? Was it a medical report revision of all the patients of the institution? Who made that? Were then called back after a medical report review to make the CT examination for
the study or they also did it for another reason? And if there was a recall for the exam, were medical data collected again for study (symptoms and physical examination)? Please, clarify. The reason for excluding patients was only because of the available data or was it also for the other exclusion criteria you have written before? Please, clarify. A flow chart could be used for a better understanding of the patients' inclusion.

You used many times the term incidence. The incidence of a disease is the rate at which new cases occur in a population during a specified period. And the prevalence of a disease is the proportion of a population that are cases at a point in time. You detected patients by medical reports and cervical radiographs and then, you made CT of total spine. Since there was only one evaluation of total spine, isn’t the term incidence incorrect? Please, explain and replace the terms incidence for prevalence if appropriated.

Why the study does not have a control group?

Results

Again, you used the term incidence, instead of prevalence. Please, explain and replace the terms if appropriated.

Line 303 - separate 12.0 fold - 12.0 fold.

I suggest you put the numbers with the percentage in each data you have showed. For example, you could write in line 278: "... and 31.7% (102 / 322) of the patients had diabetes mellitus."

Discussion

Line 341: "To the best of our knowledge, there has been no detailed research on the prevalence of OPLL at each spinal level or on the levels most likely to contain ossified lesions in patients with cervical OPLL". This sentence is not correct. The reference number 6 made that (on that study’s results, page 4, there is the "Prevalence of OPLL in the thoracolumbar spine in patients with cervical OPLL" and on the page 6 there is "The cervical OP-index classification for prediction of the presence of OPLL in the thoracolumbar spine"). So, you must exclude this sentence or rephrase it in another way.

Line 354: "This is the first multicenter study to review the distribution of ossification in patients with severe OPLL". This is also not correct, and the example is reference 6. So, you must exclude this sentence or rephrase it.
Line 391: "...we could not evaluate clinical symptoms". But what about line 237: "... as well as symptoms, such as neck pain, numbness in the upper and/or lower extremities, and clumsiness or gait disturbance"? And line 241: "... of whom only 322 had full clinical, demographic, and anthropometric data available for analysis".
So, did you have access to those data, even in a retrospective way or not? And if you had, why did you decide not to use it? Please, clarify that.

Conclusion and references:
No comments.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.
Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.
I am able to assess the statistics

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Please indicate the quality of language in the manuscript:
Acceptable
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