Reviewer’s report

Title: Posterior decompression and occipitocervical fixation followed by intraoperative vertebroplasty for metastatic involvement of the axis

Version: 1 Date: 05 Nov 2017

Reviewer: Michael Betz

Reviewer’s report:

1. Wording is much better, but there are still linguistic errors

Title: Intraoperative Vertebroplasty Combined With Posterior Decompression and Occipitocervical Fixation To Metastatic involvement of the Axis: write: .... for metastatic involvement of the axis

Line 37-38: However, the metastases to the upper cervical spine were rarely reported in the literature[4, 5]: write: However, metastases to the upper cervical spine...

Line 137-139: Metastasis to the spine was commonly spread through the Batson plexus, a valveless vertebral venous complex. Additionally, the vertebral body was the most common site to be affected compared with the posterior elements[10]: write: Metastasis to the spine are commonly spread through the Batson plexus, a valveless vertebral venous complex. Additionally, the vertebral body is the most common site to be affected compared with the posterior elements[10]

Line 140-142: The clinical picture of metastatic involvement of the upper cervical region ranges from localized pain to the variable extent of the neurological deficit and even death induced by spinal cord compression[11, 12]: write: The clinical picture of metastatic involvement of the upper cervical region ranges from localized pain to a variable extent of the neurological deficits and even death induced by spinal cord compression[11, 12].

Line 163-164: Reviewed from the literature, the recurrence rate was similar for palliative surgery compared with TES[19]. Write: Lei et al. described that the recurrence rate...

Line 180: Hence, the antitumoural effect needed further study. Write: Hence, the antitumoural effect needs further study.

Line 198-199: The shorter posterior fixation might later become insufficient and increase the risk of reoperation.... Revise this sentence

2. The fact that in your study, laminectomy and removing of the superior and inferior facet joints and pedicle were performed first and followed by transpedicular vertebroplasty,
must be highlighted. This approach distinguishes your article from previous published series and differs from the 'normal' surgical approach, where instrumentation is performed first to diminish the risk of spinal cord damage. On the other hand your procedure makes sense as cement leakage can be detected and cleared immediately.

In my opinion you should think about changing the title of your article. For example you could write:

'Posterior Decompression and Occipitocervical Fixation followed by Intraoperative Vertebroplasty for Metastatic involvement of the Axis.'

This order should, in my opinion, be maintained in the results and conclusions section.

For example

Results: Line 22-23: Results: All patients underwent posterior decompression and occipitocervical fixation followed by intraoperative vertebroplasty...

Conclusions: Line 31-33: Posterior decompression and occipitocervical fixation followed by intraoperative vertebroplasty was a safe and valuable palliative method with relatively less invasion to treat metastatic involvement of the axis.

3. The quality of Figure 1a-1d is poor. Please deliver high-resolution images / radiographs

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.

Not relevant to this manuscript
Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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