Author’s response to reviews

Title: Prediction of survival prognosis after surgery in patients with symptomatic metastatic spinal cord compression from non-small cell lung cancer

Authors:

Mingxing Lei (leimingxing2@sina.com)
Yaosheng Liu (632763246@qq.com)
Chuanghao Tang (332966711@qq.com)
Shaoxing Yang (1594926419@qq.com)
Shubin Liu (wuzhao114@126.com)
Shiguo Zhou (zhousg1968@sina.com)

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Dear reviewers and editors,

The comments have been carefully taken into account and a new revised submission have been uploaded. The responses are as follows,

To reviewer #1:

Seven mentioned grammar and spelling errors have been corrected. Please refer to the present manuscript text. We highlighted all the altered passages in light gray.

The responses to other two questions:

1. In the present study, preoperative ambulatory status was significant associated with postoperative survival according to the univariate analysis, whereas it was excluded in the multivariate analysis. Theoretically, there is a difference in survival between patients with Frankel E and patients with Frankel D, but we failed to find the difference probably due to the limitation of the total number of the patients.
2. To our knowledge, patients who have no neurological function for more than 48 hours are unlikely to improve the neurological status [1], and the poor survival prognosis was found to be significantly correlated with the time developing motor deficits less than 14 days in our study. Therefore, patients with neurological deficits due to metastatic spinal cord compression should be treated with surgery as soon as possible so as to rapidly prevent the progression of disease and maximally maintain the motor function of patients, if applicable.


To reviewer #2:

1. Of the total series of 64 patients, 6 patients were treated with radical resection of primary lung cancer, while the primary lung cancer in other patients were unresectable. Therefore, the resectability of the primary lung cancer was not considered as a factor to avoid statistical bias resulted from the extremely unbalance of the distribution of the patients in our study.

2. Agree. Changes have been made. The manuscript title have been changed into the following, prediction of survival prognosis after surgery in patients with symptomatic metastatic spinal cord compression from non-small cell lung cancer. The statement, patients with asymptomatic metastatic spinal cord compression were not included in our study, so this scoring system doesn’t pertain to those patients, which have been added in the last paragraph of the discuss section.

3. Based on the median age of the patients. The median age was used to divide the patients into two groups to achieve the biggest statistical power.

4. Time developing motor deficits was defined as the time from deterioration of motor function to disability or surgery. Deterioration of motor function was defined as a change of at least one Frankel grade. This definition had been added in the surgery and functional evaluation section of the manuscript text before revision.

5. The cut off for number of vertebrae involved was based on the previous studies [1-3].

6. No, we didn’t. Visceral metastasis (no vs. yes) was also widely and acceptably used to assess patients’ prognosis. Notably, metastatic spinal cord compression is an oncological emergency. In approximately 20% of patients with MSCC, spinal cord compression is the first manifestation of malignancy [4]. In this emergency, a B ultrasonic can be used to determine whether liver, renal, and adrenal gland, the most common organs that lung cancer tends to metastasis to, were involved, and an X-ray can be used to make sure whether patients have primary lung cancer. Those examinations can be done within half a day before surgery in our department. However, an MRI which is routinely performed to evaluate the
exactly extent of visceral metastasis needs approximately 1.5 days in our department. Therefore, visceral metastasis (no vs. yes) is relatively convenient and easy to obtain from the patients before surgery.

7. Several grammar errors have been corrected.


