Author’s response to reviews

Title: Risk factors and treatment of pneumothorax secondary to granulomatosis with polyangiitis: a clinical analysis of 25 cases

Authors:

Xuhua Shi (sunshinehua1999@aliyun.com)

Yongfeng Zhang (zyf760116@sina.com)

Yuewu Lu (sxhherosci@sina.com)

Version: 1 Date: 28 Dec 2017

Author’s response to reviews:

Response letter:

Reviewer reports:

Reviewer #1: The Authors reported an interesting short review of the literature about cases of patients affected by pneumothorax (PNX) secondary to granulomatosis with polyangiitis (GPA). Their main objective was to investigate the risk factors and the treatment strategies of this disease.

I would like to address some observations and comments:

1. At page 4, line 7, the Authors reported Figure 1. The picture is appropriate but it may be useful in the legend of this figure to describe the microscopic features of the picture itself.

Re: At page 18, line 387-391, “The pathology of a patient with granulomatous vasculitis (GPA) by percutaneous lung biopsy” was replaced with “The microscopic features of pulmonary nodule obtained by percutaneous lung biopsy in a patient with granulomatous vasculitis (GPA). There are more infiltrating lymphocytes, neutrophils and eosinophils in fibrous tissues. Granulomas composed of tissue cells and inflammatory cells are also visible. There are prominent inflammatory cell infiltration and granuloma in the wall of small vessels. HE staining, 100×”. Thank you.
2. At page 4, lines 34-39, the Authors cited a case treated by themselves: due to the fact that this case report has been already recently published, it could be very interesting to add this article to the references (Exp Ther Med. 2017 Jun;13(6):3586-3590).

Re: In page 4, line 61 “,27” was inserted and the reference was added in page 17, lines 382-384. Thank you.

3. The Authors included among the different types of PNX also the cases with empyema; they should clarify why these 8 cases were included; if they showed a clear PNX at chest X-ray or CT scan; or other reasons.

Re: These 8 cases with empyema showed a clear pneumothorax at chest X-ray or CT scan. In the bottom part of Table 1 “*: These cases with empyema showed a clear pneumothorax at chest X-ray or CT scan.” was inserted. Thank you.

4. At page 8, at lines 49-51 the Authors reported that "… lack of response to pleural drainage… "; they should explain what means "response to the pleural drainage.

Re: “lack of response to pleural drainage” means that the lung did not expand and the air leaks were not controlled. At page 8 and 9, lines 165-166 “refers to the failure of the lung to re-expand or large persistent air volume leaks,” was inserted. Thank you.

5. In Table 4 the acronym ERS should be elucidated in the bottom part of the Table.

Re: In Table 4, the acronym ESR is elucidated. In the bottom part of Table 4 “ESR, erythrocyte sedimentation rate.” was inserted. Thank you.

6. In Table 4 are reported 7 cases of patients who underwent surgery: the Authors should in the Results paragraph clarify if the surgery was performed for the treatment of the PNX or for other reasons.
Re: At page 8, in lines 154-158 “Some patients underwent surgery.” was replaced with “Seven patients underwent surgeries, including pulmonary cavity resection, pulmonary lobectomy, and partial pleurectomy, etc. Four patients underwent surgery because the lung failed to re-expand or there were large persistent air volume leaks after pleural drainage and the details were not recorded properly.” Thank you.

Reviewer #2: Very interesting paper about a rare condition.

7. Can you specify the period of time of the observation?

Re: At page 5, at lines 67-68, "Because it is a retrospective research, the period of observation spans from 1978 (the first case) to 2015 (the last case)." was inserted. Thank you.

8. Are there any differences about surgical treatment of pneumothorax between different thoracic surgery division (i.e. all surgical procedures were performed by VATS? All patients underwent wedge resection of nodule? Pleurodesis was performed?) If there are differences in surgical treatment, in your opinion may influence the exitus?

Re: At page 12, at lines 240-251, "Due to the small sample size, it is still unclear whether there are differences between different thoracic surgical methods. The common purpose of different surgical methods is to achieve lung expansion and to repair persistent air leaks. Therefore, video-assisted thoracic surgery (VATS) is recommended in order to reduce the damage to the patient. Not all nodules require operative resection except in those with cavity inside and adjacent to pleural. Similarly, pleurodesis is not always necessary and should be determined according to the patient's actual conditions. According to my own understanding and experience, lung expansion and cessation of air leaks after surgical/immunosuppressive therapy and the effective control of severe complications such as infection are most important factors for a better prognosis. Different surgical methods do not have significant impact on the prognosis." was inserted. Thank you.