

Dear Editors and Reviewers:

Thank you for your letter and for the reviewers' comments concerning our manuscript entitled "Klebsiella pneumoniae severe pneumonia complicated by acute intra-abdominal multiple arterial thrombosis and bacterial embolism: A case report"(Manuscript NO.: 77986). Those comments are all valuable and very helpful for revising and improving our paper, as well as the important guiding significance to our researches. We have studied comments carefully and have made correction which we hope meet with approval. Revised portion are marked in red in the paper. The main corrections in the paper and the responds to the reviewer's comments are as flowing:

Responds to the reviewer's comments:

1. Response to comment (Reviewer 1): (Write gram-negative as Gram-negative in all manuscript. Also, correct the HVKP to hvKp and KP to Kp)

Response: we have replaced gram-negative with Gram-negative, HVKP with hvKp, and KP with Kp in the manuscript.

2. Response to comment(Reviewer 1): (Write the name of prescribed antibiotic in the abstract)

Response: Considering the Reviewer's suggestion, We have marked the prescription antibiotic "meropenem" in the abstract.

3. Response to comment(Reviewer 1): (How the author checked and evaluated that the patient had normal immune function?)

Response: The patient is a middle-aged male who has been healthy in the past, and does not smoke, drink, have diabetes, or take immunosuppressants and other incentives that lead to low immunity,and blood test lymphocyte subsets, IgM, IgG, IgA, IgE, IgD contents were normal. Therefore, we believe that the patient had normal immune function.

4. Response to comment(Reviewer 1): (Add the company name and countries for material used in this study including biochemical, immunological, and microbiology kits)

Response: We have added the company name and countries for material used in this study including biochemical, immunological, and microbiology kits, mainly indicating in the culture of microorganisms and bronchoalveolar lavage fluid

metagenomic next generation sequencing (BALF-mNGS).

5. Response to comment(Reviewer 1):(Why the linezolid and vancomycin are prescribed as the Gram-negative bacteria are resistant to these antibiotics?)

Response: Pneumonia caused by hematogenous disseminated Kp infections is similar to Staphylococcus aureus infection, such as multiple nodules near the pleura of both lungs, or accompanied by hollow nodules, trophovascular signs, anti-halo signs, and other CT image features can appear . Severe pneumonia was considered at the initial diagnosis of the patient. According to the imaging signs of chest CT, we needed to suspect a pulmonary infection caused by Staphylococcus aureus among Gram-positive cocci. Therefore, linezolid was given for anti-infection. The condition did not improve after linezolid anti-infection, and abdominal pain occurred on the 3rd day of admission. At this time, we considered whether there was a bloodstream infection of Staphylococcus aureus, and considered that the blood concentration of vancomycin in the blood was much higher than that of linezolid. Therefore, vancomycin was replaced, but both linezolid and vancomycin were ineffective against the highly virulent Klebsiella pneumoniae belonging to Gram-negative bacilli. Thus ,there is a risk of failure in antibiotic therapy only based on the characteristics of chest CT images.

6. Response to comment(Reviewer 1):(The Table 1 can be deleted as n information adds to manuscript. Also, it is in Chinese language).

Response: Considering the Reviewer's suggestion, and after consultation with all authors, we deleted Table 1 after adding the contents of the table to the manuscript.

7. Response to comment(Reviewer 1):( The references are to old to use. Replace all references before 2018 with new recent references. I recommend to use the following references in introduction and discussion to strength your manuscript)

Response: Considering the Reviewer's suggestion, We have replaced the relevant literature before 2018 with the latest literature as much as possible, and accepted the literature recommended by the reviewers in the introduction and discussion to further improve the manuscript. The main contents added are as follows: 1. In this case, highly virulent Klebsiella pneumoniae infection was considered, and this part and related progress were appropriately added; 2. For multiple intra-abdominal arterial embolism,

especially how bacterial embolism is combined with thrombus, the demonstration and analysis were carried out; 3. Bacterial suppositories are controversial in thrombolytic therapy, so we reviewed and discussed the literature on this issue; It must be mentioned that, at present, the efficacy and safety of arterial thrombolysis are mainly reported on acute ischemic stroke secondary to infective endocarditis. Therefore, we are deeply sorry that we have not found relevant literature on arterial thrombolysis for bacterial embolism in recent years, so the literature cited in the new content in this regard is older.

8. Response to comment(Reviewer 2): (Figure 1b, patient's face showing just to allude nasal high flow oxygen, is not necessary. Delete figure 1b )

Response: Considering the Reviewer's suggestion ,we have deleted Figure 1b.

9. Response to comment(Reviewer 2): ( Table 1 has contents in Chinese, get this translated to the English language, please)

Response: Dear reviewer, after consultation with all authors, we deleted Table 1 after adding the contents of the table to the manuscript.

10. Response to comment(Reviewer 3): (What is the purpose of Fig.2? )

Response: Our purpose was to convey the authenticity of this case, and it was also expressed that the patient was administered high-flow nasal cannula supportive therapy. However,considering the reviewer's suggestion,we have deleted it.

11. Response to comment(Reviewer 3): (What is the prognosis of the patient, please comment before the conclusion )

Response: Considering the Reviewer's suggestion, we have described the prognosis of this patient before the conclusion.

We tried our best to improve the manuscript and made some changes in the manuscript. These changes will not influence the content and framework of the paper. And here we did not list the changes but marked in revised paper.We appreciate for Editors/Reviewers' warm work earnestly, and hope that the correction will meet with approval. Once again, thank you very much for your comments and suggestions.

Yours

Sincerely

Xiao-Li Bao

