Dear editors and reviewers,

We would like to thank you for reviewing our manuscript. Your remarks are very helpful to improve the manuscript and have been fully addressed in the revision.

In the revised manuscript, we have revised one by one according to the comments of the reviewers, the Editorial Office's suggestions and the Criteria for Manuscript Revision, and we have sought further language polishing from American Journal Experts (AJE) (Appendix I: English Editing Certificate.). All changes are marked with yellow color.

Below are our point-by-point responses to the comments.

Reviewer #1:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Major revision

Specific Comments to Authors: Review 87340 The case report by Li et al. describes the case of a neonate that succumbed to methicillin-resistant Staphylococcus aureus (MRSA) pneumonia. Overall, the case presentation of the patient's vitals is well presented, including the steps that were done to save the neonates life. The biggest issue is how was it determined that the bacteria was S. aureus and how the antibiotic susceptibility testing was done. Was S. aureus identified by biochemical tests or mass spectrometry or another method? Was a disk diffusion assay performed to determine susceptibility to the antibiotics noted or was another approach used? What criteria were applied to say this was a MRSA strain?

The identification and the antibiotic susceptibility testing of Staphylococcus aureus in this case were conducted by the DL-96A Auto Microbial ID/AST System (Zhuhai Dier Bioengineering Co., LTD., Zhuhai, China) using biochemical tests and broth dilution method (MIC method), respectively, in the department of laboratory

medicine at our hospital. The criteria for identification of MRSA are resistant to cefoxitin and/or oxacillin. As the topic of this paper is a clinical case report, we only presented the MRSA culture results and antibiotic susceptibility test results in the text, without elaborating on the above details. We apologize for any inconvenience caused.

Other comments are noted below.

1. Line 19 Abstract Case Summary Change the comma to a semi-colon.

We had revised it according to your suggestion, but it was rechanged to a comma by American Journal Experts (AJE) when we sought further language polishing, as shown in the Abstract Case Summary section: After high-frequency oscillatory ventilation, empiric antimicrobials (meropenem and vancomycin), improved circulation, and right pleural cavity drainage for right pneumothorax (approximately 90% compression), his oxygen saturation level stayed above 95%, and recruitment of the right lung was observed.

2. Line 26 Abstract Case Summary remove the comma.

It has been revised, as shown in the Abstract Case Summary section: Although his spontaneous heartbeat returned through emergency resuscitation and salvage antibacterial therapy (linezolid and levofloxacin) was administered…….

3. Line 9 Abstract Conclusion Change At this very moment to Currently.

It has been revised, as shown in the Abstract Conclusion section: Currently, ECMO has been a remedial therapy, but if the lung tissue is too severely eroded to be repaired, it may be useless unless the infection can be controlled and lung transplantation can be performed.

4. If you are going to use line designations have it start with the abstract and proceed through the remainder of the manuscript rather than restarting the line numbering for each separate section.

Thank you for your suggestion. Due to the inability of the revised manuscript submission system to display the line numbers, they have been cancelled.

5. Introduction Lines 7 and 8. Change to Methicillin-resistant *S. aureus* causes both hospital-.

It has been revised, as shown in the Introduction section: MRSA causes both hospital-associated infections and community-acquired infections[2,6-10].

6. Introduction Line 15 Change to lead to shock and.

It has been revised, as shown in the Introduction section: Pneumonia caused by MRSA is severe and refractory, with acute onset, rapid progression and high mortality, manifested by repeated episodes of fever, symptoms of severe infection and dyspnea, and it can lead to shock and multiple-organ failure[11-12].

7. Introduction Line 15 What is Its?

Here, 'Its characteristics' refers to 'the characteristics of MRSA pneumonia'. To avoid ambiguity, we have revised it according to your suggestion, as shown in the Introduction section: The characteristics of MRSA pneumonia on chest imaging vary, including such features as pneumothorax[11], empyema[11,13] and pneumatoceles[11,14-15].

8. Introduction Line 17 Add and penmatoceles.

It has been revised, as shown in the Introduction section: The characteristics of MRSA pneumonia on chest imaging vary, including such features as pneumothorax[11], empyema[11,13], and pneumatoceles[11,14-15].

9. Laboratory examinations Add parameters after dehydrogensase.

It has been revised, as shown in the Laboratory examinations section: Changes in leukocyte, erythrocyte, hemoglobin, platelet, neutrophil (%), C-reactive protein, creatine kinase–MB, lactate dehydrogenase, and hydroxybutyrate dehydrogenase parameters (Table 1) indicated that the above items had increased to varying degrees, except for the decreases in erythrocytes, hemoglobin, and platelets.

10. Species names are italicized.

It has been revised, as shown in the Laboratory examinations section: MRSA infection was confirmed by multiple cultures (sputum and pleural fluid)

(Table 2), while other pathogen tests, such as *Mycoplasma pneumoniae*, *Chlamydia pneumoniae*, cytomegalovirus, herpes simplex virus, rubella virus, *Toxoplasma gondii*, *Mycobacterium tuberculosis*, adenovirus, parainfluenza virus 2, parainfluenza virus 3, human coronavirus 229E/NL63, influenza virus A, rhinovirus, and respiratory syncytial virus, along with cerebrospinal fluid culture and blood cultures, were all negative.

11. Laboratory examinations Do not state suggested infection. Be definitive in naming the species responsible.

We have used 'confirmed' instead of 'suggested', as shown in the Laboratory examinations section [MRSA infection was confirmed by multiple cultures (sputum and pleural fluid) (Table 2)] and Treatment section [Afterward, MRSA infection was confirmed by multiple cultures (Table 2).].

12. How do you know this is a highly virulent strain of MRSA?

Indeed, the virulence of MRSA strains is usually determined by many virulence factors. Our primary application of 'this highly virulent strain of MRSA' to highlight the clinical destructiveness of this MRSA is inappropriate, so we have made a deliberate decision to remove 'highly virulent', as shown in in the Discussion section: Most importantly, this strain of MRSA caused severe necrotizing pneumonia with extensive necrosis of the lung tissue and recurrent pyopneumothorax, which may be the primary reason for the rapid deterioration of this child's condition. Here, we would like to thank you again for your rigorous attitude and deeply apologize for our careless expression.

Reviewer #2:

Scientific Quality: Grade C (Good)

Language Quality: Grade A (Priority publishing)

Conclusion: Accept (General priority)

Specific Comments to Authors: Nice case report by the authors - regarding aggressive treatment of MRSA pneumonia in a neonate. Options for and against

ECMO were discussed well.

Thank you very much for your approval.

Best regards,

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Appendix I:

AJE

Editing Certificate

This document certifies that the manuscript

Neonatal methicillin-resistant Staphylococcus aureus pneumonia related recurrent fatal pyopneumothorax: A case report

prepared by the authors

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was edited for proper English language, grammar, punctuation, spelling, and overall style by one or more of the highly qualified native English speaking editors at AJE.

This certificate was issued on **September 20, 2023** and may be verified on the AJE website using the verification code **34F3-FFE2-BA00-4C84-ABAP** .

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