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Reviewer A

This manuscript attempts to analyze WBC counts and flow cytometry parameters to help diagnose severe *M. pneumoniae* disease in children. There is some interesting data presented, but there are several issues that need to be clarified/addressed.

1) Line 35: A conclusion made is "The predictive model formulated by age, CD3-CD19+(%), and monocyte counts may play an important role in the early diagnosis of sMPP in admitted children, especially in children aged ≤ 5 years." It is unclear how data that was collected at the time of severe pneumonia could be used as an early diagnostic marker. The changes in the WBC numbers, etc are likely to be a result of disease severity, not the cause or occur prior to development of severe pneumonia. It appears the data are not predictive of severity of disease, they simply correspond to the severity of disease. Thus, the significance of these results are not clear and may only be an additional parameter to confirm disease severity. If the data were obtained prior to the development of severe disease, then this might identify parameters that might be predictive. This is a major weakness.

Reply: Thank you for your comments. Firstly, to obtain data prior to the development of severe disease as far as possible, we excluded patients who had been diagnosed with severe *Mycoplasma pneumoniae* pneumonia before admission. Secondly, as we mentioned in the methodology section of the paper (see Page 6, line 77-78), the patient data were obtained from specimens collected for the first time after their admission to the hospital, and we believe that the patients were still in the pre-pneumonia stage when they were first admitted to the hospital, which was predictive of the later development of the disease and was helpful for physicians to diagnosis and treat. Of course, before we conducted this study, we reviewed a lot of literature. With regard to studies related to predicting the severity of *Mycoplasma pneumoniae* disease, the approach taken in these studies was to use specimens collected after the patient's admission to the hospital as a parameter of the study, and we have listed the following literature for your reference:

1. Li YT, Zhang J, Wang MZ, Ma YM, Zhi K, Dai FL, Li SJ. Changes in coagulation markers in children with *Mycoplasma pneumoniae* pneumonia and their predictive value for Mycoplasma severity. *Ital J Pediatr.* 2023 Oct 20;49(1):143. doi: 10.1186/s13052-023-01545-1. PMID: 37858230; PMCID: PMC10588045.
2. Zhang WH, Zhou MP, Zou YY, Chen JW, Wang T, Huang L, Yan YD, Ji W, Zhu CH, Chen ZR. The predictive values of soluble B7-DC in children with refractory *mycoplasma pneumoniae* pneumonia. *Transl Pediatr.* 2023 Mar 31;12(3):396-404. doi: 10.21037/tp-23-86. Epub 2023 Mar 27. PMID: 37035403; PMCID: PMC10080492.
3. Li D, Gu H, Chen L, Wu R, Jiang Y, Huang X, Zhao D, Liu F. Neutrophil-to-lymphocyte ratio as a predictor of poor outcomes of *Mycoplasma pneumoniae* pneumonia. *Front Immunol.* 2023 Dec 19;14:1302702. doi: 10.3389/fimmu.2023.1302702. PMID: 38169689; PMCID: PMC10758472.
4. Qiu J, Ge J, Cao L. D-dimer: The Risk Factor of Children's Severe *Mycoplasma Pneumoniae*

Pneumonia. *Front Pediatr.* 2022 Apr 12;10:828437. doi: 10.3389/fped.2022.828437. PMID: 35498793; PMCID: PMC9039299.

Changes in Text: see Page 5, line 72.

2) Lines 85-88. What parameters were used to differentiate children with severe vs non-severe *M. pneumoniae* disease? What objective criteria dictates poor general condition, increased respiratory rate, extra pulmonary complications, etc.?

Reply: Thank you for your valuable comments. We differentiated children with severe vs non-severe *M. pneumoniae* disease by parameters such as patients' general condition, respiratory rate, chest imaging, hypoxemia, and extrapulmonary complications. The objective criteria dictating poor general condition are pale or gray face, poor response to surroundings; the objective criteria dictating increased respiratory rate are respiratory rate > 70 breaths/min in infants, and 50 breaths/min in older children; the objective criteria dictating chest imaging are multilobar or $\geq 2/3$ infiltrate in the lung; the objective criteria dictating hypoxemia are transcutaneous oxygen saturation $\leq 92\%$ on room air; the objective criteria dictating extrapulmonary complications are heart failure, myocarditis, gastrointestinal bleeding, central nervous system infection, etc.

Changes in Text: We have modified the parameters and objective criteria as advised. (see Page 6, line 88-93)

3) Throughout text (including references), genus and species name should be italicized, e.g., *Mycoplasma pneumoniae* needs to be italicized.

Reply: Thank you for your reminder. We have corrected all genus and species names to italics throughout the article.

Changes in Text: See Page 1, line 3, 5; Page 2, line 11, 24; Page 3, line 39; Page 4, line 47, 49; Page 5, line 55; Page 6, line 82; Page 7, line 109; References, line 234, 236, 238, 240, 246, 247, 254, 255, 259, 262, 263, 283, 285, 288, 296, 298, 307; Page 17, line 320, 321, 327

4) Lines 49, 80; *Mycoplasma* needs to be capitalized.

Reply: Thank you for your reminder. We have corrected *Mycoplasma* to be capitalized.

Changes in Text: See Page 1, line 3, 5; Page 2, line 11, 24; Page 3, line 39; Page 4, line 47, 49; Page 5, line 55; Page 6, line 82; Page 7, line 109; Page 17, line 320, 321, 327

5) Lines 73-75: More details of the PCR tests and passive agglutination tests need to be included. If they were commercial kits, the source, etc. should be given. References for the assays should be provided if they were not commercial kits.

Reply: Thanks for your constructive comments. We have added details of the diagnostic methods for *Mycoplasma pneumoniae* infection. And the reference for the assays is provided (see reference 7).

Changes in Text: see Page 5, line 74; Page 6, line 75-76.

5) Line 114: Misspelled word: "revealed"

Reply: Thank you for your reminder. We have made the necessary change as advised.

Changes in Text: see Page 8, line 119

6) Lines 137-138: The texts discusses numbers of cases, but the data only shows percentages.
Reply: Thank you for your reminder. We have redrawn Figure 1, and the data shows numbers of cases as well.

Changes in Text: see Figure 1.

7) Lines 145-147: The authors suggest that weakened immune responses are the reason that there was an increase number of *M. pneumoniae* cases after the pandemic was over. This does not make sense. It could be that there was increased personal contacts, attending crowded events, etc. This would be due to the relaxing of public health policy and a concomitant increase in potential for spread of infection.

Reply: Thanks for your constructive comments. We agree that the reviewer's points are quite correct, so we have added the reviewer's points to the article. At the same time, we have added some relevant viewpoints from the literature about the increase number of *M. pneumoniae* cases after the pandemic.

Changes in Text: see Page 9, line 152-157.

8) Line 154: The authors state "Decreased neutrophil count reduces the severity of MPP-induced lung lesions". This may be better phrased as "Lower neutrophil counts were associated with less severe disease." The study did not decrease neutrophil numbers.

Reply: Thanks for your constructive comments. We have modified our text as advised.

Changes in Text: see Page 10, line 163.

9) Line 154: Define "NLR"

Reply: Thank you for your reminder. We have defined "NLR".

Changes in Text: see Page 10, line 163.

10) Figure 1: It is not clear what the Y-axis represents. What is it a percentage of? Cases of pneumonia? Why not show numbers, as well.

Reply: Thanks for your constructive comments. We have redrawn Figure 1 as advised. The Y-axis of new Figure 1 represents the number of MPP cases. The new Figure 1 shows numbers of pneumonia cases and the percentage of total pneumonia cases.

Changes in Text: see Figure 1.

11) Table 1: I assume that the P value is a result of comparison of the nsMPP and sMPP groups, but this needs to be clearly stated in legend.

Reply: Thank you for your reminder. The P value is a result of comparison of the nsMPP and sMPP groups. We have stated the P value in legend as advised.

Changes in Text: see Table 1.

Reviewer B

1. Throughout the text, please replace all XXX with specific information.

Reply: Thank you for the editor's feedback. We have replaced all XXX with specific information.

Changes in Text: see Page 5, line 80; Page 6, line 89; Page 9, line 152; Page 13, line 239.

2. Please unify the spelling of the abbreviation 'sMPP' throughout the text. Should it be 'SMPP' or 'sMPP'?

Reply: Thank you for the editor's feedback. We have unified the spelling of the abbreviation 'sMPP' throughout the text. It should be "sMPP".

Changes in Text: see Page 6, line 97.

3. Figures & Tables

1) Lines 142-145: the highlighted areas should reference figure 2B and figure 2C, not table 2B and table 2C. Please check it.

142 In order to evaluate the predictive value of the model in different age groups, paediatric patients were

143 further divided into two groups: ≤ 5 years group and >5 years group. It was worth noting that the model

144 had a better diagnostic value for sMPP in ≤ 5 years group (AUC = 0.823; **Table 2B**). However, in >5

145 years group, the diagnostic value of model was declined (AUC = 0.693; **Table 2C**).

Reply: Thank you for the editor's feedback. We have changed table 2B and table 2C to figure 2B and figure 2C.

Changes in Text: see Page 8, line 146-147.

2) Tables: Please indicate how data are presented. For example, data are presented as mean \pm standard deviation or median (interquartile range) or number (frequency) or No. (%), etc. Such a description should be based on specific cases. Please do not directly copy the example sentence.

Reply: Thank you for the editor's feedback. We have indicated how data are presented. The quantitative data were expressed by median (interquartile range), while qualitative data were expressed by n (%).

Changes in Text: see Table 1.

4. When reporting P values, authors should follow our guidelines as listed below. P values reported on main text should be consistent as those on tables and figures.

Reporting of P values:

- The description of the P value should be in the uppercase format, i.e., "P".

- If P value <0.001 , report "P <0.001 " to avoid reporting unnecessarily excessive precision (except hypothesis tests that include correlations or studies with exponentially small P values, such as genetic association studies, which can be reported exponentially, e.g., P=1 \times 10⁻⁵).
- If $0.001 \leq$ P value <0.01 , report the specific P value to 3 decimal places, e.g., "P=0.001" or "P=0.009".
- **If P value ≥ 0.01 , report the specific P value to 2 decimal places, e.g., "P=0.01" "P=0.06" "P=0.10" "P=0.90". When the P value is near 0.05, report the specific P value to 3 decimal places, e.g., "P=0.046" or "P=0.052".**
- If the P value is >0.99 , report "P >0.99 ".
- Do not report "not significant" simply because the data is greater than an arbitrary value, and do not report only vague bounds such as P <0.05 , as described above, but report the exact P value.

Reply: Thank you for the editor's feedback. We have modified P values following the guidelines as listed above.

Changes in Text: see Table 1.