Peer Review File

Reviewer A

Comment 1: The language is a major problem. There are many significant errors that make difficult to follow the train of thoughts of the authors.

Reply 1: Thank you to the reviewers for their review and valuable feedback. I have polished and standardized the grammar, sentence, word order, and other errors in the manuscript.

Changes in the text: The revised manuscript has been attached.

Comment 2: The manuscript should be better focused. It is unclear what is the aim of this study. We already know that S100A12 and MEWS can predict worse outcome and death in CAP patients. In the ROC curve, PCT, MEWS, S100A12 have all the same predictive value. The authors should better explain the objectives of the study and focus on the innovation (?) of their article. Combining MEWS and S100A12 would mean using both scores/values to develop a novel score, which might have an even better predictive value.

Reply 2: Thank you to the reviewers for their review. In this study, the areas under the ROC curves of PCT, MEWS, and S100A12 were different, but the areas scored by S100A12 and MEWS were similar (but S100A12 had the highest predictive value). Therefore, the main purpose of this study is to explore the value of S100A12 in assessing the severity and prognosis of adult community acquired pneumonia. The severity changes of different levels of MEWS scores are positively correlated with S100A12 concentration (see Table 1). It can be seen that the joint detection of the two has certain significance. There is currently no comparison of the ratio between the two in this study. We will continue to advance this study and develop a new indicator based on the ratio of S100A12 and MEWS to explore better indicators for assessing the severity of CAP patients and predicting the value of death.

Changes in the text:we have modified our text as advised (see Page 1, line 25-28).

Comment 3: Statistical analysis (tables) include more data as written in the methods. I would suggest either to specify in the methods' section or to adjust the SPSS tables appropriately.

Reply 3: I added the specific statistical methods used in this study in the "Methods" section.

Changes in the text: we have modified our text as advised (see Page 1, line 29-33 and see Page 2, line 1-6).

Comment 4: Were the data parametric? If not, I would recommend adjusting the statistics used.

Reply 4: The data is parameterized

Changes in the text:-

Comment 5: Further sensitivity analysis including adjustment for comorbidities should be included.

Reply 5: The selected cases in this study were patients who excluded some common comorbidities（Kawasaki disease, glomerulonephritis, rheumatoid arthritis, atherosclerosis, inflammatory bowel disease, severe acute pancreatitis, tumors, acute lung injury, respiratory distress syndrome, human immunodeficiency virus infection, granulocytosis, organ transplantation, and other immunodeficiency conditions with pneumonia）,If necessary, sensitivity analysis can be added to these complications in future studies

Changes in the text: The exclusion criteria for this study are presented in the text(see Page 4, line 1-5).

Reviewer B

Comment 1: In the Abstract section, the authors should state the objective more concisely. For example, 'To investigate the application value of serum calcium-binding protein S100A12 and the Modified Early Warning Score (MEWS) for predicting mortality or diagnosing adult community-acquired pneumonia (CAP).'

Reply 1: Thank you to the reviewers for their review. The main purpose of this study is to explore the value of serum S100 calcium-binding protein A12 (S100A12) in evaluating the severity and prognosis of adult community acquired pneumonia, as well as the correlation of S100A12 concentration in different levels of modified early warning score (MEWS).

Changes in the text: we have modified our text as advised (see Page 1, line 25-28).

Comment 2: In line 192-193, 'the' should be 'the,' and 'And' should be 'and.'

Abbreviations should be fully spelled out and followed by the abbreviation in parentheses at their first mention. Subsequently, you can use the abbreviation throughout the entire document. For example, 'Modified Early Warning Score (MEWS).' The abbreviations that should be fully spelled out include CAP, SAA, CRP, PCT, MEWS, APACHE II, and NLR.

Reply 2: I carefully corrected the spelling and grammar errors in this manuscript, as well as the correct writing of abbreviations

Changes in the text: The revised manuscript has been attached.

Comment 3: The use of MEWS to predict mortality revealed high specificity but low sensitivity. In contrast, using S100A12 exhibited high sensitivity but fair specificity. Please discuss the clinical value more comprehensively.

Reply 3: S100A12 has high sensitivity and low specificity, indicating that high concentrations of this protein can be detected in the serum of CAP patients, especially severe CAP patients, but its presence can also be detected in some other systemic diseases (not exclusively); The MEWS score shows high specificity and low sensitivity, indicating that it is more accurate in predicting death in CAP patients, but the high or low score does not fully represent the severity of the disease.

Comment 4: Please provide information on the strengths and limitations of the study.

Reply 4: Several previous studies have shown that S100A12 has increased expression in systemic inflammation and local inflammatory serum to varying degrees, and has high clinical application value in the differential diagnosis of acute infectious diseases, disease severity assessment, and guidance of anti infection direction. However, there is little research on the expression of this protein in patients with pneumonia of different severity and death prediction. This study also studied the correlation between this protein and MEWS score. Shortcomings: This is a prospective single center study with a small sample size, which may lead to selection bias. Therefore, in the future, it may be necessary to increase the sample size in clinical practice to verify the results.

Changes in the text: The discussion section of this manuscript elaborates on the value of this study (see Page 8, line 5-12).