Peer Review File

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Reviewer A

It is not clear how LUS is evaluated or how b-lines are counted. Images are needed. Sample size is too small to have a representative p-value due to the beta error. Upper blue point score seems to be weird with no survivor sample (in this case it is not possible to calculate a feasible test). I suggest to re calculate the analysis with more sample size and rewrite the manuscript with more references re LUS for example COWS index that appears as more representative for this case and images supporting the way of measure.

Response: Thank you for your comments. LUS was performed using a 2- to 4-MHz convex probe by trained physicians. 5 regions of interest on each side were investigated according to the BLUE-Protocol, including the upper and lower BLUE-point in the anterior/posterior zone and posterolateral alveolar and/or pleural syndrome (PLAPS) point. Points were allocated according to the worst ultrasound pattern observed: 1) normal aeration (0 points): horizontal A-lines (or no more than two B-lines); 2) moderate loss of aeration (1 point): multiple B lines (either regularly spaced, or irregularly and even coalescent, but only visible in a limited area of the intercostal space); 3) severe loss of aeration (2 points): multiple coalescent B lines in prevalent areas of the intercostal spaces and observed in one or several intercostal spaces; and 4) complete loss of aeration (3 points): lung consolidation with or without air bronchograms (Figure 1). The abnormal findings in each LUS scan were summed up with a minimum score of zero and a maximum score of 30. We have revised the Methods and added Figure 1 as the ultrasonic images. (Page 5, Line 5-13)

We agree with the comment that the small size of the study population hindered the exploration of whether the severity of abnormal LUS findings could predict the prognosis for COVID-19 pneumonia. Due to the lack of research, we were unable to analyze the relationship between ultrasound findings and the course of the disease.

Reviewer B

Congratulations on your article. Bedside ultrasound studies have been shown of great value in critically ill patients. It is a low-cost, easy-to-use, low-risk tool that can help assess blood volume and ventilation in critically ill patients. I suggest some improvements and studies with a larger sample to increase representativeness.

Response: Thank you for your comments. We agree with the comment that the small size of the study population hindered the exploration of whether the severity of abnormal LUS findings could predict the prognosis for COVID-19 pneumonia.

This study aimed to demonstrate the clinical and lung ultrasound (LUS) characteristics in patients with coronavirus disease 2019 (COVID-19) pneumonia. It

is not clear in the objective that this was a descriptive study that surveyed clinical and sonographic data at hospital admission related to the severity and survival of patients with pneumonia due to coronavirus disease.
Response: Thank you for your comments. We have revised the objective of the study. (Page 3, Line 4-5; Page 4, Line 26)

1. Abstract:
I suggest adding the comparative results between severe and moderate groups with the p-values for each comparison, as well as survivors and non-survivors. It is not clear from the abstract the period of data collection and that this was a descriptive study on data's from admitting at single-center from patients with severe or moderate pneumonia due to coronavirus disease 2019 (COVID-19). The conclusion of the abstract was not in line with the purpose of the study, as the main objective was to demonstrate the clinical features too.
Response: Thank you for your comments. We have added the comparative results between severe and moderate groups with the p-values for each comparison, as well as survivors and non-survivors. We have indicated the study period and study design. The conclusion was revised to be in line with the purpose of the study. (Page 3, Line 14-24)

2. Methods:
Might the author explain better how they collected data's ultrasonography? Who was responsible for doing the ultrasound- clinician, intensivist, and sonographer? I suggest describing the exclusion criteria in detail.
Response: Thank you for your comments.
Patients with missing data of LUS data or major laboratory tests were excluded. The major laboratory test consisted of a complete blood count, blood urea nitrogen (BUN), albumin, serum creatinine, prothrombin time, activated partial thromboplastin time (APTT), D-dimer, lactate dehydrogenase, immunoglobulin M (IgM), IgG, alanine aminotransferase (ALT), aspartate aminotransferase (AST), total bilirubin (TBIL), direct bilirubin (DBIL).
LUS was performed using a 2- to 4-MHz convex probe by trained physicians. 5 regions of interest on each side were investigated according to the BLUE-Protocol, including the upper and lower BLUE-point in the anterior/posterior zone and posterolateral alveolar and/or pleural syndrome (PLAPS) point. Points were allocated according to the worst ultrasound pattern observed: 1) normal aeration (0 points): horizontal A-lines (or no more than two B-lines); 2) moderate loss of aeration (1 point): multiple B lines (either regularly spaced, or irregularly and even coalescent, but only visible in a limited area of the intercostal space); 3) severe loss of aeration (2 points): multiple coalescent B lines in prevalent areas of the intercostal spaces and observed in one or several intercostal spaces; and 4) complete loss of aeration (3 points): lung consolidation with or without air bronchograms (Figure 1). The

abnormal findings in each LUS scan were summed up with a minimum score of zero and a maximum score of 30.
We have revised the Methods and highlighted them in red. (Page 5, Line 5-13)

3. Statistical:
I suggest making a binary logistic regression model, including variables with p-value <0.20 in the univariate analysis.
Response: Thank you for your comments. The small size of the study population hindered the exploration of whether the severity of abnormal LUS findings could predict the prognosis for COVID-19 pneumonia. Due to the lack of research, we were unable to analyze the relationship between ultrasound findings and the course of the disease. Also, the demographics were rather simple and lacked relevant characteristics such as cigarette smoking and comorbidities. Data on the length of hospital stays and length of ICU stays were missing. We agree that more evidence is needed to provide more ultrasound information related to clinical manifestations.

4. Results:
I suggest inserting mortality into the severe/critical and moderate group and adding an algorithm with the number of patients per exclusion criterion. I suggest add "ultrasound characteristic" at the subtitle "Clinical characteristics of survivor and non-survivor group".
Response: Thank you for your comments. Consecutive patients confirmed COVID-19 pneumonia were included. Patients with missing data of LUS data or major laboratory tests were excluded. Among 146 patients, a total of 36 patients with ultrasound data were finally analyzed. The lethal cases were all diagnosed with severe (2 cases) and critical (3 cases) illnesses. The revised subtitle was "ultrasonic characteristics of COVID-19 pneumonia". We have revised the Results and highlighted them in red. (Page 3, Line 26-27)

5. Discussion:
I suggest finalized the discussion with a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies and other relevant evidence, as well as discuss the generalizability of the study results.
Response: Thank you for your comments. The first paragraph of the Discussion summarized the lacking of current evidence, leading to the objectives of the study. The second to the fourth paragraph of the Discussion compared the result of our study with other relevant evidence. Additionally, the potential mechanism underlying the ultrasonic features. The fifth paragraph of the Discussion elaborated on the previous relevant findings of clinical and laboratory test results related to the severity of COVID-19 pneumonia. Finally, the article described the limitations of the present study. We have revised the Discussion. (Page 6, Line 5-6)

6. Conclusion:

The conclusion did not comment on the clinical findings as stated in the study objectives.

Response: Thank you for your comments. We have revised the conclusion and comment on the clinical findings. (Page 7, Line 31-32)