Peer Review File

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Reviewer A

This rich review on the effectiveness of POCUS in many of the pathological aspects of COVID-19 disease, both from a diagnostic and prognostic point of view, is certainly very well done. Appropriate and interesting is the breadth of topics covered, encompassing the entire spectrum of settings in which the disease is still managed, from Emergency Departments to Intensive Care Units to outpatient surveillance of the consequences of lung disease. Particularly interesting is the collection of information on the most recent applications of POCUS such as DTF in relation to ventilation techniques and their outcome, and very complete is the discussion of the prognostic value of POCUS with reference both to mortality and to the prediction of eventual readmission of patients to hospital. Although not particularly strong in terms of methodology, this review substantially summarises the value of POCUS, a relatively new method, in the management of COVID-19 disease and appropriately defines its relationship with other imaging methods. I think it may be of great use to clinicians who are and will be dealing with this disease, which has not yet been completely eradicated.

Our reply:

We thank the reviewer for the encouraging comments.

Reviewer B

Your article is very interesting, it brings together the indications of the POCUS/LUS and emphasises its important role in the field of emergency. However, I would propose a review of the literature and some corrections:

Comment 1:

1-Row 101: not only intercontinental travel but also climatic variations induce pandemic events, these facilitate viral 'SPILLOVER' between different animal species

Reply 1:

We thank the reviewer for the suggestion. We have made changes to Lines 101 to 103 and added in 2 more references.

Changes to the text:

Global pandemics are rising threats facilitated by pathogen spillover from wild animal species into humans driven by ecological alterations from climate change and accelerated by the steady growth of intercontinental air travel.[1,2] This threat was evident in the past 3 years by the COVID-19 pandemic that spread worldwide from early 2020.

Comment 2:

2-Riga 117 add bibliography (Descriptive analysis of a comparison between lung ultrasound and chest radiography in patients suspected of COVID-19)

Reply 2:

We have added this reference.

Changes to the text:

This reference has been added in as reference 6 to Lines 117-118: "Lung ultrasound (LUS) have been shown to possess higher sensitivity and accuracy in detecting pathologies as compared to CXR.[5,6]"

Comment 3:

3-Riga 171 when mentioning "light beam", add bibliography note no. 68

Reply 3:

We have added in this reference as suggested.

Changes to the text:

Original reference 68 has been added to this statement: 'The "light beam" sign[23] has been described in early phases of COVID-19 pneumonia, referring to B-lines that look like shining bands…' [Reference numbering has been changed due to its position in the text]

Comment 4:

4-Riga 348, add recent article (Volpicelli et Fraccalini) Feasibility of a New Lung Ultrasound Protocol to Determine the Extent of Lung Injury in COVID-19 Pneumonia

Reply 4:

We thank the reviewer for the suggestion. We have made changes to the manuscript in Lines 349-350.

Changes to the text:

This has been added to Lines 349-350: An estimation of the degree of extension of lung lesions to the pulmonary surface using LUS also correlated significantly with the severity on CT imaging.[89]

Comment 5:

5-Riga 548, add article in bibliography (Characteristics and predictors of pulmonary embolism in patients admitted for COVID-19 with respiratory failure)

Reply 5:

We have added in this reference.

Changes to the text:

This reference has been added in Lines 549 to 550: "…clotting of vascular access catheters and dialysis circuits due to a prothrombotic state and is associated with higher morbidity and mortality.[17,147,148]"