Peer Review File

General Comments:

This study used bibliometric analysis to evaluate current literature that investigates the use of ultrasound in critical care units. The Science Citation Index Expanded (SCI-E) database was used for data retrieval. The search formula for literature retrieval was "ultrasound" OR "ultrasonography" AND "intensive care unit" OR "critical care unit" OR "intensive care" OR "critical care". The bibliometric software package of R software was used to analyze the results. The authors analyzed 3,715 articles. The number of published articles and the number of references increased annually. The research fields included medical imaging, critical care medicine, cardiology, etc. The United States has published more documents in this field than other countries and has shown the highest rate of cooperation with other countries. Among the top 10 research institutions with the largest number of publications, 5 are from France and 3 are from the United States. There are many authors from China in the top 10 published studies. Among the top 10 journals with the largest number of published articles, 5 journals are top journals in the field of critical care medicine. Among the top 10 keywords, there are 5 of ultrasound specialty and 2 of critical care medicine. The authors concluded that research on the use of ultrasound in critical care units is mainly 46 concentrated in several developed countries in Europe and the United States. Chinese 47 research institutions should perform more studies in this field and increase cooperation 48 with institutions from other countries.

Specific comments:

1. Why did the authors start the search with the year 1900? Please justify…

Reply: Actually, there is no specific time limit. We revised this.

Changes in the text: page 6/line 1-2: Literature retrieved by using the above keywords and published were included without specific time limit.

2. How did they choose the used keywords? Please better explain. We have POCUS, critically ill patients …..

Reply: By using the keywords mentioned in the text, most related literature can be found. The search strategy is fuzzy search.

Changes in the text: page 6, line 1: OR "intensive care" OR "critical care" in a fuzzy method.

3. Why did they cite China and not other countries?

Reply: Since we are doctors from China, we focused somewhat on China.

Changes in the text: None.

4. How did the program choose the relevance of the studies and the participation of institutions, researchers, papers, and their collaborations? Please clarify.

Reply: We used the bibliometric software package of R software to do related analysis.

Changes in the text: This was described in the section of "analysis".

5. How and why did the authors choose the 38 references for their…

Reply: We want to use these references to provide an overview of status of studies on the utility of ultrasonography in critical care practice.

Changes in the text: None.

6. What are the authors' main messages and how does this review change the knowledge of the field? Please clarify….

Reply: We described these points in the discussion, and especially in the "conclusion" section.

Changes in the text: None.

<mark>Reviewer B</mark>

1) First, the abstract needs some revisions. The background did not describe the clinical needs for this research focus and what the knowledge gap is. The methods need to briefly describe the literature search strategies, data analysis, and main indicators in bibliometrics analysis. The results need to use detailed data to support the main findings such as the increasing rates and proportions. The conclusion is not supported by the findings. The authors need to further clarify the implications of the findings.

Reply: We make some revisions in the abstract.

Changes in the text: Please check the text. Thanks.

2) Second, in the introduction of the main text, it remains unclear what the questions to be answered by the bibliometrics analysis, what the potential clinical significance of the bibliometrics analysis, whom are informed by such data, and what the current knowledge gap is.

Reply: We make some revisions in the introduction.

Changes in the text: Please check the introduction. Thanks.

3) Third, in the methodology of the main text, the authors need to have more details of the bibliometrics analysis including the main indicators and their potential implications. The statistical analysis should be performed by using the special software for bibliometrics analysis, not Excel.

Reply: We make some revisions in the section of "Analysis" and "Statistical analysis".

Changes in the text: Please check the section of Statistical analysis.

4) Fourth, several related papers are suggested to be reviewed and cited in this paper: 1. Kalchiem-Dekel O, Hossain S, Gauran C, Beattie JA, Husta BC, Lee RP, Chawla M. An evolving role for endobronchial ultrasonography in the intensive care unit. J Thorac Dis 2021;13(8):5183-5194. doi: 10.21037/jtd-2019-ipicu-09. 2. Jiang L, Wang L, Zhang D, Liu Y, Chen D, Shi X, Wang Z, Xiao D. Sepsis-related immunosuppression: a bibliometric analysis. J Thorac Dis 2023;15(4):1684-1693. doi: 10.21037/jtd-23-300. 3. Gatasi G, Musa TH, Odjidja EN. Bibliometric analysis of the top 100 cited articles on HIV/AIDS. Ann Infect 2021;5:6. 4. Zhang X, Wang C, Zhao H. A bibliometric analysis of acute respiratory distress syndrome (ARDS) research from 2010 to 2019. Ann Palliat Med 2021;10(4):3750-3762. doi: 10.21037/apm-20-2050.

Reply: We added two of these reference in the text.

Changes in the text: Please check them in the manuscript.

<mark>Reviewer C</mark>

The paper titled "Ultrasonography in the intensive care unit: a bibliometrics analysis" is interesting. Researches on the use of ultrasound in critical care units are mainly concentrated in several developed countries in Europe and the United States. Chinese research institutions should perform more studies in this field and increase cooperation with institutions from other countries. However, there are several minor issues that if addressed would significantly improve the manuscript.

1) There are many databases. Why did the author only select SCI-E databases in this study for searching? Please explain the reason.

Reply: We added some words in the first paragraph of "Methods" section.

Changes in the text: page 5/line 16-18: The online Science Citation Index Expanded (SCI-E) database in the Web of Science Core Collection (WOSCC) was used for data retrieval, since it is the most common used database in medical research.

2) This study is based on the analysis and summary of the literatures. It is suggested to add clinical experimental research, which may be more meaningful.

Reply: Thank you for your advice. However, this is a bibliometrics study, which is not focused on a specific disease.

Changes in the text: None.

3) What are the challenges of training the frontline clinician to become competent in intensive care ultrasonography? It is suggested to add relevant contents.

Reply: We added some contents in the introduction.

Changes in the text: page 4, line 3-4: … ultrasound in the ICU and the status of related studies remains unclear.

4) It is recommended to increase the comparison between ultrasonography and other advanced hemodynamic monitoring technologies in the intensive care unit.

Reply: Thank you for your advice. However, this is a bibliometrics study focused on the status of related studies on the utility of ultrasonography in ICU, which is not focused on the actual utility of ultrasonography. Thanks.

Changes in the text: None.

5) The introduction part of this paper is not comprehensive enough, and the similar papers have not been cited, such as "An evolving role for endobronchial ultrasonography in the intensive care unit, J Thorac Dis, PMID: 34527358". It is recommended to quote the articles.

Reply: We cited this article in Discussion section.

6) From a clinical perspective, what factors can help doctors apply ultrasound for multiple intensive care indicators in clinical practice? It is suggested to add relevant contents.

Reply: Again, this is not a clinical research. It is just a study on literature. Thanks.

Changes in the text: None.