

## Peer Review File

Article information: <https://dx.doi.org/10.21037/shc-23-32>

Reviewer A:

Comment 1: I would like to commend you for your scholarly work. I was delighted to have the opportunity to review it. Your review offers valuable insights into a pertinent and significant clinical topic. However, there are a few areas that could be further refined to enhance the quality and impact of your work. Below are some respectful suggestions that, if you choose to implement them, may improve the manuscript:

Reply 1: Thank you.

Comment 2: Abstract:

- The abstract provides a succinct overview of the paper. To enhance its impact, however, you could begin by highlighting one or two of the most groundbreaking or intriguing aspects of the review. This would captivate the readers from the outset.

Reply 2: The abstract has been edited to incorporate these highlights.

Comment 3: Introduction:

- Expanding the introduction with additional background information on the pathogenesis and pathophysiology of each condition would greatly benefit readers' comprehension of these diseases. Incorporating simple schematics can be an effective method for visualizing these complex processes.
- Furthermore, it is advisable to include data on the incidence and prevalence of these conditions, specifically in high-income countries, in addition to the global statistics that are cited. This would contextualize the relevance of the review for a broader audience.
- To assist readers less familiar with thoracic structures, incorporating a figure that offers a visual overview of pleural anatomy would prove invaluable. This visual aid can serve as a quick reference point and enhance the overall understanding of the paper.

Reply 3: The introduction has been modified to allow easier understanding, and a figure with the anatomy of the pleura has been added.

Comment 4: Clinical Presentation and Diagnosis:

- The section effectively outlines diagnostic criteria in a comprehensive manner. Consider adding a summary table to present key lab and imaging criteria in a visually digestible format. This table would make it easier for readers to grasp the essential diagnostic information quickly.
- To make this section more engaging and practical, it would be beneficial to include a typical case presentation or vignette. Such a narrative approach can draw readers in and help them apply the knowledge to real-life scenarios.
- Differentiating between pleural tuberculosis and empyema is crucial, and a table comparing their key distinguishing features could be a valuable addition. This table would enable readers to readily distinguish between these conditions, enhancing their diagnostic proficiency.

Reply 4: Two tables and two case vignettes have been added. Writing has been simplified for better cohesiveness.

Comment 5: Management Strategies:

- You delve extensively into various management options. To enhance reader comprehension and retention, consider including a treatment algorithm figure that synthesizes this wealth of information. Such a visual aid can help readers grasp the treatment pathways more effectively.
- Providing additional context on the current standard of care and guidelines is recommended, given the wide array of therapies covered. This context would offer readers a clearer understanding of the conventional practices in this field, making the paper more informative.
- To increase the practicality of the paper for clinicians, it would be valuable to include estimated costs and cost-effectiveness data for the various therapies, if available. This information can assist healthcare professionals in making informed decisions and improve the applicability of the paper.
- Explicitly noting which management options have the strongest level of evidence is essential to guide clinical practice. This clarity will help readers discern the most evidence-based approaches, fostering better decision-making in patient care.

Reply 5: An algorithm was added and an integration paragraph with evidence levels.

Comment 6: Discussion:

- The discussion offers an insightful commentary by situating the paper within the context of the COVID-19 pandemic's impact. To further emphasize its significance, consider expanding on this aspect with current statistics. This will help readers better grasp the immediate relevance and real-world implications of the research.
- To demonstrate scholarly introspection, it is important to acknowledge the limitations of the current review. By openly acknowledging the boundaries of the research, you can maintain transparency and help readers better interpret the scope and implications of the paper.
- Commenting on any knowledge gaps or controversies that still exist concerning diagnostic or therapeutic approaches is essential. Identifying these areas of uncertainty or debate will not only enrich the discussion but also shed light on opportunities for future studies and research directions.
- Restating one or two key takeaway points regarding best practices is advisable. This will provide readers with a helpful summary as they conclude their reading, reinforcing the most critical insights and actionable recommendations.

Reply 6: Limitations have been added, also takeaway points have been added.

Comment 7: Your meticulous review of the literature and skilful synthesis of a vast amount of information have resulted in a well-crafted paper. The implementation of the suggestions mentioned above would likely elevate the manuscript's readability and accessibility to the journal's diverse readership. I eagerly anticipate the revised version of the manuscript and extend my best wishes in your continued research endeavours.

Reply 7: Thank you.

Reviewer B:

Comment: This is a review of chronic empyema, from its history to current treatment methods.

The problem seems to be that this manuscript does not describe the empyema with bronchopleural fistula which refractory and the most difficult-to-treat condition of empyema.

Pulmonary mycosis and pulmonary non-tuberculous mycobacterial diseases, which have been increasing in recent years, can be the causes of this condition. Postpulmonary resection status and pulmonary suppuration may also be compromised and lead to empyema with fistel. We must always keep in mind this difficult condition and never be optimistic.

Reply: A paragraph has been added.