

Peer Review File

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Reviewer A

Comment 1: Thank you for the opportunity to review this manuscript. The authors present a broad review of issues related to COVID and IP. At times the article is quite unfocused, moving between epidemiology, clinical presentation, methodology of diagnosis, radiologic findings, and finally bronchoscopy.

Reply 1: We would like to thank the Reviewer very much for the consideration of our work. We fully agree with his/her comment; we wrote this review when knowledge about COVID-19 was lower than now; in that context, in our opinion, a review that summarized more extensively various aspects of this disease could be useful. According with this comment of Reviewer 1 we revised the introduction, making it much more concise and eliminating the epidemiological, clinical and radiological aspects that were not essential to explain our topic, namely interventional pulmonology, which is now central to our manuscript.

Changes in the text (line numbers refer to the text version with "no markup" chosen on the review tab of MS Word):

- in Pages 4-6, lines 73-119 we eliminated unnecessary information (see the text using the "Track Changes" function of MS Word) about epidemiology, clinical presentation, methodology of diagnosis and radiological findings
- in Pages 6-20 we added information strictly focused on interventional pulmonology, as described in the reply of comment 2.

Comment 2: There are innumerable reviews of COVID and I think for this to be strong review the authors should try to focus on one area - namely IP/bronchoscopy.

Reply 2: We thank the Reviewer for this comment, with which we fully agree. After our first submission, several papers have been published on COVID-19 and for this reason (as anticipated in the reply to comment 1) we decided to revise our manuscript

focusing more on Interventional Pulmonology and eliminating the aspects that have already found space in the publications of the past months. Moreover, we changed the structure of the manuscript, to make it more focused on I.P. We eliminated the sections “viral RNA detections”, “radiologic diagnosis” and “serologic diagnosis” and we chose the following new structure, that is focused on the usefulness of interventional pulmonology:

- o Introduction
- o The role of interventional pulmonology in COVID-19 patients
- ♣ Bronchoscopy for the diagnosis of SARS-CoV-2 infection
- ♣ Bronchoscopy in the management of COVID-19
- ♣ Pleural and mediastinal diseases related to COVID-19
- o Interventional pulmonology procedures in the COVID-19 era
- ♣ Bronchoscopy - when to perform
- ♣ Bronchoscopy - how to perform
- ♣ Management of pleural diseases - when to perform
- ♣ Management of pleural diseases - how to perform
- ♣ Personal protective equipment (PPE)
- o Looking forward to the post-pandemic era: the role of interventional pulmonology
- ♣ Diagnosis of COVID-19 related fibrosis
- ♣ Follow up in intubated or tracheostomized patients

Changes in the text (line numbers refer to the text version with "no markup" chosen on the review tab of MS Word):

- in Page 6, lines 129-135 we added updated data about patients with negative swabs and a positive detection of SARS-CoV-2 RNA in BAL
- in Page 8, lines 165-182 we added updated knowledge about the role of bronchoscopy
- in Page 9, lines 194-225 we added a sub-chapter about the role of interventional pulmonology in pleural and mediastinal diseases related to COVID-19
- in Page 14, lines 318-321 we changed the introduction of pleural diseases focusing it in the interventional pulmonology field
- in Page 16, lines 352-354 we added a sentence about the management of discharged patients with pleural devices or chest drains in situ for pneumothorax due to COVID-

19

- in Page 17, line 391 we changed the title of the sub-chapter, now more focused on the role of interventional pulmonology
- in Page 18, lines 414-423 and in Page 19, lines 433-437 we added information about the role of bronchoscopy in the understanding of the abnormalities subsequent to COVID-19
- in Page 20, lines 448-454 we added information about the role of bronchoscopy in assessing the right time for decannulation and in avoiding decannulation failure
- in Page 20, lines 460-462 we added an updated consideration about tracheal stenoses

Comment 3: Multiple emerging studies discuss the utility of bronchoscopy for diagnosis of COVID which could be summarized. In summary i understand the evidence to suggest a low yield when PCR and CT are negative, and unacceptable risk to staff when CT is positive.

Reply 3: We thank the Reviewer for this suggestion. We enriched this part by further highlighting these sectors, which we report again in figure no. 1

Changes in the text (line numbers refer to the text version with "no markup" chosen on the review tab of MS Word):

- in Page 6, lines 129-135 we added updated data about patients with negative swabs supporting a limited role for BAL in diagnosis of COVID-19 if thoracic imaging and upper respiratory tract specimens are concordantly negative
- in Page 7, lines 150-151 we underlined the role of BAL when CT is suggestive but PCR is negative: to confirm COVID-19 or to obtain an alternative diagnosis
- in Page 7, lines 151-152 we quoted figure 1, where these aspects are summarized
- in Page 7, lines 152-155 we added information about bronchoscopic samplings

Comment 4: The authors correctly discuss that "indications of every endoscopic request have to be deeply analyzed by the interventional pulmonologist". A dedicated review has been published exploring this in detail, including consideration of alternate

approaches to diagnosis of lung cancer (Respirology 2020 Jul;25(7):703-708).

Reply 4: We thank the Reviewer for this suggestion: the review of Steinfert and coworkers was published after our first submission and it deals in depth with a theme that we discussed about. Therefore, we expanded these contents and we cited that review.

Changes in the text (line numbers refer to the text version with "no markup" chosen on the review tab of MS Word):

- in Page 12, lines 264-273 we added a paragraph about the diagnosis of lung cancer and alternate approaches to it in consideration of the stage;
- in table 1, lines 24-30 (15th point) we added recommendations about it.

Comment 5: In summary, there are already several papers cited by the authors describing the role/practice of bronchoscopy during COVID. I think the authors need to emphasize the novel aspects of their recommendations more clearly.

Reply 5: We thank the Reviewer for this feedback. Our aim is to describe the Interventional Pulmonology activity in the pandemic era, providing recommendations that include the main international guidelines and the evidence currently published.

We believe that the usefulness of our manuscript is to summarize the information provided by various published documents and to update the content in the light of what has been more recently published. In this direction, we added 30 new references.

According to the suggestion of the Reviewer to emphasize the novel aspects of our recommendations more clearly, we modified the previous table 1, adding the main information of the previous table 2. We think that the new table helps readers to better understand what we recommend in the manuscript.

Furthermore, another novel aspect of our paper is that it discusses about the role of interventional pulmonology in the post COVID-19 (diagnosis of COVID-19 related fibrosis and follow up in intubated or tracheostomized patients), that is not included in international guidelines and in other reviews.

Changes in the text: we completely changed table 1 and table 2: now we present a

unique table that report our recommendations more clearly.

Reviewer B

Please add some comments on spontaneous pneumothorax associated with COVID19 and its management

Reply 1: We thank the Reviewer for this useful suggestion. We added a paragraph in which we describe spontaneous pneumothorax associated with COVID19. We think that this topic is useful to improve our manuscript and we are grateful to the Reviewer.

Changes in the text (line numbers refer to the text version with "no markup" chosen on the review tab of MS Word):

- in Page 9, lines 194-225 we added a sub-chapter called “Pleural and mediastinal diseases related to COVID-19” that is focused on pneumomediastinum and pneumothorax and their management.