

Peer Review File

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Reviewer A

Comment 1: This manuscript by Mariani et al does a nice job summarizing the results of the survey to better understand the current state of thoracic surgery in Brazil.

Reply: Thank you for the critical revision of our paper. We appreciate your comments.

Comment 2: If available, it would add to the manuscript if the authors were able to more clearly describe the microbiologic species (other than TB) for which patients require operative management; for example, fungal or specific NTM species.

Reply: As for the etiology, the question asked to the surgeons divided the etiologies into:

- 1- Tuberculosis Sequelae (including sequelae with and without associated aspergillosis infection)
- 2-Active Tuberculosis including Multidrug Resistant Tuberculosis
- 3-Mycobacteria non-tuberculosis
- 4-Bronchiectasis not cystic fibrosis and not post-tuberculosis

Respondents who reported having performed resections due to tuberculosis sequelae, there was another question asking whether there was associated aspergillosis infection. And, 206 participants answered the question: "How many operated cases had associated aspergilloma or cavitary chronic aspergillosis". Of the respondents, 35 (17.0%) said they had none, while the majority, 155 (75%) said they had 1-5 resections (155, 75.2%). Only 16 respondents (7.8%) had more than 6 lung resections associated with pulmonary aspergillosis

Other less frequent infectious diseases such as mucormycosis were not included in the survey, but it is a valuable tip to add in the next survey that we are planning to carry out throughout Latin America. The incidence of mucormycosis and aspergillosis not related to TB sequelae is so low in Brazil that only a few reference services (I can point only 3) have any experience with it. I agree that these etiologies are essential and should receive our attention.

Changes in the text: we have modified our text as advised to explain better about how the separation of etiologies was carried out (see Page 5, line 136)

Comment 3: For the paragraph in the discussion that starts at line 225, it may strengthen the manuscript to more fully tie in how the authors' survey compares with the studies they are referencing.

Reply: In the paragraph on line 225, we aim to provide context for the significance of Video-

Assisted Thoracic Surgery (VATS) in lung resection for oncology and inflammatory/infectious diseases. Our survey findings indicate that, despite existing evidence supporting the benefits of VATS in treating inflammatory/infectious diseases, its utilization for lung resection in Brazil remains limited due to resource constraints.

Reviewer B

This report is about the results of surveyance for surgical treatment for chronic lung infections in Brazil, especially the surgical treatment of tuberculosis. When we have a patient who has mycobacterium infection, we discuss the treatment with the pulmonologist and radiologist along with the guideline, which is a multidisciplinary conference. There is a high rate of complication in surgical treatment for mycobacterium infection, so we, surgeons are very careful thinking about the strategy of treatment. This report gives us suggestions for the treatment of our clinical works. English is easy to read, however I have some questions for the authors.

Comment 1: When we focused on Table 1, the authors showed the number of indications. There were TB sequelae, non-cystic-fibrosis bronchiectasis and not secondary to TB, TB resistant, and Mycobacterium non-tuberculosis in the Table. The title of this report is "Practice patterns and trends in surgical treatment for CHRONIC LUNG INFECTIONS". Therefore, the authors need to include fungal infection as Aspergillosis or Mucor infection in the Table. I assume the authors may include these infections in "Non-cystic-fibrosis bronchiectasis and not secondary to TB". But this report is your message to the surgeons in the world, so I recommend adding the number of fungal infections, even if the number is very small.

Reply: As for the etiology, the question asked to the surgeons divided the etiologies into:

- 1- Tuberculosis Sequelae (including sequelae with and without associated aspergillosis infection)
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Respondents who reported having performed resections due to tuberculosis sequelae, there was another question asking whether there was associated aspergillosis infection. And, 206 participants answered the question: "How many operated cases had associated aspergilloma or cavitary chronic aspergillosis". Of the respondents, 35 (17.0%) said they had none, while the majority, 155 (75%) said they had 1-5 resections (155, 75.2%). Only 16 respondents (7.8%) had more than 6 lung resections associated with pulmonary aspergillosis

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to TB sequelae is so low in Brazil that only a few reference services (I can point only 3) have any experience with it. I agree that these etiologies are essential and should receive our attention.

Changes in the text: we have modified our text as advised to include data regarding aspergillosis diseases associated with tuberculosis sequelae/ (see Page 5, line 156).

Comment 2: I hope that the authors explain ERAS (Enhanced Recovery After Surgery) on line 168. Is this Intensive care for the patients after surgery? Is this the special care system in Brazil?

Reply: We refer to ERAS as Enhanced Recovery After Surgery, which is a standardized perioperative measure aimed at decreasing postoperative organ dysfunction, facilitating recovery and achieved through the introduction of various evidence-based perioperative measures. It is a protocol that has been adopted by several services and specialties. Despite having been initially introduced in colorectal surgery, there are already studies showing good results in thoracic surgery as well.

The ERAS guidelines for thoracic surgery were best summarized in the recent publication endorsed by the European Society of Thoracic Surgeons and the Enhanced Recovery After Surgery Society in the *European Journal of Cardio-Thoracic Surgery* 55 (2019) 91–115 GUIDELINES doi:10.1093/ejcts/ezy301.

Changes in the text: We have modified our text as advised and we added more references to explain better about ERAS (see Page 6, line 168)/ (see Page 12, line 365).

Comment 3: The authors mentioned the surgical approach for these patients with lung infectious diseases. They showed the rate of Videothoracoscopy and Robotic surgery, however the type of surgery was not shown, such as lobectomy, pneumonectomy, or partial resection. WHO recommended partial resection in the report in 2016. I hope to know which type of surgery these surgeons selected.

Reply: In this First survey we did not ask for the type of lung resection because we intended to understand the logistics and the infrastructure available and used by the thoracic surgeons. In this scenario, we believe that if we asked about the numbers or the proportions of the type of resection, we probably received very biased information. However, we intend to repeat the study in 2024 and we will accept the suggestion to improve the survey, adding questions for respondents to specify the lung resections performed.

Comment 4: I was very surprised at the results that almost half of the surgeons did not perform routine drug sensitivity tests and did not perform an adjuvant treatment after surgery not only for multidrug-resistant pulmonary tuberculosis but also for active TB infection. Is that the issue in Brazil only? In my country, usually we do perform adjuvant chemotherapy after surgery for TB and Non-TB infections.

Reply: This is one of the key findings we aimed to convey to the public through our survey. The scarcity of resources, including challenges in conducting sensitivity tests, is a significant factor influencing the use of this particular treatment. While our survey focused on Brazil, it is plausible to speculate that similar resource limitations exist in other Latin American countries, albeit possibly varying in degree, ranging from slightly better to potentially worse.