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Reviewer A

It is an interesting case report with a well written description of the clinical case and discussion. Particularly, the opinions of the experts (presumably external) on some of the debatable aspects of managing this case have been well-documented and appreciated. However, this is not the rarest of the presentation of the TO, as claimed by the authors. In fact, the orphan disease TO is most commonly reported/diagnosed along with a chronic non-communicable disease, and malignancy is not an uncommon association. I suggest the authors read the recently published scoping review on TO (PMID – 37974722) for further information on this. As per this review, one in two patients with TO tends to have a comorbidity, and among malignancies, lung carcinoma is the commonest association to have been reported with the TO (see Table.2 of the review). Even the bacteriology, associated with this case is the most common microbiological picture to have reported in the literature. Nonetheless, not being rare presentation is not the ground for non-acceptance of this otherwise well-written report. Having said that, I would ask the authors to modify the report by incorporating the following suggestions.

1. Change the statements in highlight, abstract, introduction, and discussion from statements like “TPO complicated by lung cancer” into “TPO association with lung cancer” and “scarce in the medical literature” into something like “less studied association.”

Reply 1: Thank you very much for your thorough review of our manuscript. Based on your feedback, we have implemented the following revisions:

We revised "TPO complicated by lung cancer" to "TPO association with lung cancer" and substituted "scarce in the medical literature" with "less studied association."

Changes in the text: Page 2, line 47, 54; Page 4, line 91, 109; Page 7, line 199

2. As of now the narration is suggestive of TPO is contributing factor for Lung cancer, but for obvious reasons this needs to be changed to incidental association between them, with probable etiopathological relationships that need to be studied further.

Reply 2: Thank you for your valuable advice. We have modified and improved the paper.

Changes in the text: Page 7, line 200-202

3. Also, in highlight box, abstract as well as in description of the actual text, the authors use phrases like “Lobectomies for TPO complicated by lung malignancy are,” and “Performing a lobectomy for TPO complicated by lung tumors,” which convey a different meaning altogether. Instead, authors should make it clear Lobectomy was performed for lung cancer (which would have been done anyway irrespective of presence or absence of TO) but the patient also had TO, and thus had developed post-operative infection. As for all the description provided, I

understand that there was no active intervention done for TO in this case, which is actually the best approach of the available therapeutic options, as detailed in the scoping review.

Reply 3: Thank you for your valuable advice. We have modified and improved the paper.

The lobectomy was carried out for lung cancer, a procedure that would have proceeded regardless of the presence or absence of TPO. However, this may heighten the risk of postoperative pulmonary infection.

Changes in the text: Page 2, line 57,58; Page 3, line 59, 68, 81,82; Page 4, line 111,112; Page 6, line 141; Page 7, line 186-189;

4. The intra-operative anaesthesia manoeuvre followed in this case is commendable, and that's how it should be done. As summarised in the scoping review, TO is well-known to produce unplanned airway difficulties intraoperatively, if not accounted for in the pre-surgical workup. The authors could highlight this aspect as well in the Highlight box.

Reply 4: Thank you for your valuable advice. We have followed your advice and revised.

Changes in the text: Page 2, line 55-57

5. Being the largest compilation of all the published case reports, the scoping review can be cited at various places in this report, as explained above.

Reply 5: Thank you for your valuable advice. We have incorporated references.

8. Devaraja K, Surendra VU. Clinicopathological Features and Management Principles of Tracheobronchopathia Osteochondroplastica - A Scoping Review. Indian J Otolaryngol Head Neck Surg 2023;75:3798-3814.

Changes in the text: Page 7, line 177-181; Page 8, line 203; Page 14, line 399-401

Reviewer B

Manuscript was well written. I just have a few comments for minor revision.

1. The authors can add a discussion or explanation why TPO can also be a concern postoperatively. Such as in the author's case development of pneumonia.

- See study by Heo JW, Lee EG, Gil B, Kang HS, Kim YH. Tracheobronchopathia Osteochondroplastica Associated with Fibrotic Interstitial Lung Disease. Intern Med. 2021;60(21):3463-3467, where they explained that TPO may contribute to decreased efficiency of clearing respiratory secretions thus leading to lower respiratory infections.

-Heo et al also mentioned that TPO is commonly associated with other disorders and lung diseases such as lung malignancy

Reply 1: Thank you for your valuable advice. Following your recommendations, we have add a discussion and cited the reference.

Despite meticulous surgical techniques, the patient developed right lower lobe pneumonia postoperatively. Heo et al. explained that TPO may impair the efficiency of clearing respiratory secretions, potentially leading to lower respiratory infections. They also noted that TPO is commonly associated with other disorders and lung diseases, including lung malignancy (15).
15. Heo JW, Lee EG, Gil B, et al. Tracheobronchopathia Osteochondroplastica Associated with Fibrotic Interstitial Lung Disease. *Intern Med* 2021;60:3463-3467.

Changes in the text: Page 8, line 220-223; Page 15, line 417, 418

2. The authors can add in the manuscript studies showing what is the typical finding of TPO on histopathology, because in other studies, they cite biopsies to rule out possible differentials such as amyloidosis, etc.

Reply 2: Thank you for your valuable advice. followed your advice and revised.

The most characteristic feature of TPO includes squamous metaplasia along with calcified cartilage or new bone formation (calcification/ossification) in the submucosal or interstitial plane.

Changes in the text: Page 7, line 177-181

3. Suggest to improve the conclusion. May omit the first sentence in the conclusion.

Reply 3: Thank you for your valuable advice. We have removed the first sentence.

Changes in the text: Page 9, line 237