Dear Mr. Wang,

On behalf of my co-authors, we thank you very much for giving us an opportunity to revise our manuscript, we appreciate editor and reviewers very much for their positive and constructive comments and suggestions on our manuscript entitled "Delayed diagnosis of arytenoid cartilage dislocation after tracheal intubation in the intensive care unit: A case report". (Manuscript NO.: 74925, Case Report).

We have studied reviewer's comments carefully and have tried our best to revise our manuscript according to the comments. Our manuscript was also polished by a native English speaker from a language services company. Attached please find the revised version, which we would like to submit for your kind consideration.

We would like to express our great appreciation to you and reviewers for comments on our paper. Looking forward to hearing from you.

Thank you and best regards.

Yours sincerely,

Wen-Qing Yan

E-mail: wqyan@email.ncu.edu.cn

Corresponding author

Name: Zhi Chen

E-mail: zhichen@tongji.edu.cn

List of Responses

Dear Editors and Reviewers:

Thank you for your letter and for the reviewer's comments concerning our manuscript entitled "Delayed diagnosis of arytenoid cartilage dislocation after tracheal intubation in the intensive care unit: A case report". (Manuscript NO. 74925, Case Report). Those comments are all valuable and very helpful for revising and improving our paper, as well as the important guiding significance to our researches. We have studied comments carefully and have made correction which we hope meet with approval. The main corrections in the paper and the responds to the reviewer's comments are as flowing:

Replies to the reviewers' comments:

Reviewer #1

Comment 1: BACKGROUND Arytenoid cartilage dislocation is a rare and misdiagnosed complication following intubation or blunt laryngeal trauma. I suggest adding the word tracheal before the intubation to avoid misunderstandings.

Response: Thanks for the reviewer's kind suggestion. According to this advice, we have added the word tracheal before the intubation at Page 3 line 4.

Comment 2: The patient prognosis should be briefly explained in the CASE SUMMARY section.

Response: Thanks for the reviewer's kind suggestion. Prognosis is also an important part of CASE SUMMARY section. The patient follow-up times and prognosis were added at Page 3 line 26-27.

Comment 3: Please state in the CASE SUMMARY section whether ENT is involved in treatment or surgery.

Response: Arytenoid closed reduction performed by the experienced otolaryngologist. We state this point in the CASE SUMMARY section and TREATMENT section at Page 3 line 25 and Page 6 line 25.

Comment 4: Imaging examinations: The pictures under the laryngoscope are the focus of this article. It is recommended to increase the picture comparison and simple explanation after surgical reduction, which will be more helpful for readers to understand the whole article.

Response: We thank the reviewer for this recommendation, which is instructive to our future work. However, no picture after surgical reduction was taken. This is a defect in our manuscript. For our patient, preoperative and postoperative photographs will be more helpful to understand the successful treatment, although she had regained his normal voice. For readers, this will be more helpful to understand the whole article.

Comment 5: The patient refused to repeat CT scanning after reduction success and during follow-up since she had regained her normal voice. I suggest adding the recommendation to review the cricoarytenoid joint three-dimensional CT and laryngeal EMG in the postoperative review.

Response: Thank you very much for your pertinent comment and valuable suggestion. We have revised it as reviewer suggested at Page 6 line 14-15. Compared with electronic laryngoscope and ordinary CT scan, three-dimensional CT reflects the shape of cricoarytenoid joint, the nature of dislocation and the displacement direction of arytenoid cartilage more intuitively and clearly. LEMG can be used to differentiate the patients with

vocal cord paralysis from arytenoid cartilage dislocation.

Comment 6: This hypothesis was later discredited by cadaveric studies that high-force simulated intubation fails to dislocate CAJ [8]. The point of view expressed in this sentence does not seem to be in line with the whole article, and it is recommended to rewrite it.

Response: We thank the reviewer for the constructive suggestion. The initial aim of this statement was to review the pathogenesis of arytenoid cartilage dislocation. Our presentation was incorrect. We have rewritten it at Page 7 line 10-11.

Comment 7: Longer ICU stay, longer tracheal intubation duration, and the existence of a nasogastric feeding tube, were the risk factors for the present patient. The description of risk factors is too absolute, and it is worth exploring whether longer ICU stay is a risk factor. If there are references, please include the references, if there are no relevant literatures, it is recommended to re-describe the risk factors.

Response: The view that longer ICU stay is a risk factor is wrong. There are no relevant literatures. Thank you so much for pointing out my mistake. We have removed the “longer ICU stay”.

Comment 8: In addition, a large number of patients in the ICU are still impaired or die after extubation. Specifically, what function is impaired? Does it mean that the disorder of consciousness cannot cooperate with the examination or the function of the larynx is impaired? This should be described emphatically, it should be a risk factor, and it has an important guiding role in avoiding missed diagnosis and misdiagnosis in the future.

Response: We thank the reviewer for the constructive suggestion. The impaired patients mean the patient has cognitive or language impairment. It is particularly difficult to identify symptoms of arytenoid cartilage dislocation, leading to missed or delayed diagnosis. Further details are specified in the discussion section at Page 8 line 21-22.

Comment 9: The author's supplementary documentation is very complete and very convincing. This is a retrospective study, was ethics approval obtained to conduct this study? It is recommended that an ethics approval number be provided in the article.

Response: This study was approved by the Medical Research Ethics Committee of Jiang Xi Provincial People's Hospital (approval no.2022-012).

Reviewer #2

Comment 1: State standard practice to intubation and extubation of trachea with scientifically tested evidences.

Response: Thank you very much for your pertinent comment and valuable suggestion. Endotracheal intubation and extubation were strictly according to the guidelines for the management of tracheal intubation in critically ill adults (the 2018 DAS/ICS/FICM/RCoA guidelines[1]). We have illustrated this point at Page 5 line 12-14.

Comment 2: The authors final diagnosis was that "endotracheal intubation causes the dislocation of the left arytenoid cartilage, if so it was a poor practice and unethical to cause significant harm on patients by using 7.5mm endotracheal tube inserted into the trachea of 20-years old female (potentially the size was large for age and sex) for 13 days.

Response: We thank the reviewer for this recommendation. In fact, no widely accepted guidelines exist for determining endotracheal tube size in adults, although largely defaulted to choosing a 7.0 mm for women during routine an aesthesia. But the purpose and duration of intubation in the ICU population, is often very different compared with that during an aesthesia[2]. We carefully consulted the literature, and using a 7.5mm for a female is reasonable in the ICU according to the 2018 DAS/ICS/FICM/RCoA guidelines[1]. The current literature does not inform that larger tube may be a risk factor for arytenoid cartilage dislocation.

Comment 3: Why not the tube was changed for those procedures like lumbar and laparotomy surgeries, the former procedure is most likely done in prone position. This may be a cause of CAJ dislocation if the tube was stayed for longer.

Response: We thank the reviewer for this recommendation. We did not change the tube due to safety concerns for the patient. An anesthesiologist evaluated that the patient did not change the tube. In addition, the available literature does not in form that pone position may be a risk factor.

Comment 4: The authors said that "Definitive diagnosis was made at the 15th day after extubation. After extubation, the patient remained in a state of sedation and analgesia and could not communicate effectively. After 10 days, hoarseness and coughing with liquids were observed. We considered these symptoms due to a common laryngeal edema after tracheal intubation". The coherence is very important, with time from of a case report, the 10th day event should be reported prior to the 15th day event.

Response: We thank the reviewer for this recommendation. On the premise of guaranteeing the coherence and accuracy, we have adapted the order of some sentences. Further details are specified in the discussion section at Page 8 line 7-16.

REFERENCES

1. **Higgs A**, McGrath BA, Goddard C, Rangasami J, Suntharalingam G, Gale R, et al. Guidelines for the management of tracheal intubation in critically ill adults. Br J Anaesth. 2018;120(2):323-52.[PMID: 29406182 DOI:10.1016/j.bja.2017.10.021]
2. **Farrow S**, Farrow C, Soni N. Size matters: choosing the right tracheal tube. Anaesthesia.2012;67(8):8159.[PMID:22775368DOI:10.1111/j.13652044.2012.07250.x]

Our manuscript was polished by a professional English language editing company. We have uploaded new language certificate.

In addition, we knew that the publication fee will be discounted by 10% for manuscripts contributed by Editorial Board members and Peer-Reviewers. The Corresponding Author's Number ID is 05452563.

Once again, thank you very much for your constructive comments and suggestions which would help us both in English and in depth to improve the quality of the manuscript.

Thank you and best regards.

Yours sincerely,

Wen-Qing Yan

E-mail: wqyan@email.ncu.edu.cn

Corresponding author

Name: Zhi Chen

E-mail: zhichen@tongji.edu.cn