Early View

Correspondence

Reply to the letter to the Editor by Terzi *et al.*: Swallowing dysfunction in patients hospitalised due to a COPD exacerbation, in *ERJ Open* Research

M. Gonzalez Lindh, C. Janson, H. Koyi

Please cite this article as: Lindh MG, Janson C, Koyi H. Reply to the letter to the Editor by Terzi *et al.*: Swallowing dysfunction in patients hospitalised due to a COPD exacerbation, in *ERJ Open Research. ERJ Open Res* 2021; in press (https://doi.org/10.1183/23120541.00515-2021).

This manuscript has recently been accepted for publication in the *ERJ Open Research*. It is published here in its accepted form prior to copyediting and typesetting by our production team. After these production processes are complete and the authors have approved the resulting proofs, the article will move to the latest issue of the ERJOR online.

Copyright ©The authors 2021. This version is distributed under the terms of the Creative Commons Attribution Non-Commercial Licence 4.0. For commercial reproduction rights and permissions contact permissions@ersnet.org

Reply to the letter to the Editor by Terzi et al: Swallowing dysfunction in patients hospitalised due to a COPD exacerbation, in *ERJ Open Research*.

M. Gonzalez Lindh^{1,2}, C. Janson³, H. Koyi^{2,4}

¹Dept of Neuroscience, Uppsala University, Sweden. ²Centre for Research & Development, Uppsala

University/Region Gävleborg, Sweden

³Dept Medical Sciences, Respiratory, Allergy & Sleep Research, Uppsala University, Sweden.

⁴Karolinska Institute, Sweden. Department of Respiratory Medicine.

Dear Editor,

We thank professor Terzi, doctor Prigent and doctor Lofaso for taking an interest in our work and for their valuable comments. Although there are many studies on the coordination of breathing and swallowing, there is still much to investigate and learn about swallowing function in stable and acute COPD. In fact, few published studies have investigated swallowing function in patients hospitalized due to an acute illness other than stroke [1] and this is true for COPD patients with an acute exacerbation [2-4]. There is also much to learn regarding patient-reported outcomes (PROMS), which was one focus of our study.

We are very pleased to hear that professor Terzi's research group has performed an interventional study on COPD patients admitted to the ICU for an acute exacerbation of the disease and investigated swallowing function during non-invasive ventilation (NIV) [5]. NIV is often used on patients with hypercapnia in order to assist breathing, and as a result a more optimal breathing process facilitates the swallowing function. The fact that the patients chose to switch off the ventilator during swallowing and turning in back on immediately after, opens up opportunities for the patients to control the treatment in an optimal way. Hopefully this will be part of the treatment in the future.

Take together, our study [6] and the results presented by Terzi et al show that swallowing dysfunction is common in COPD patients with severe exacerbations but also that this kind of dysfunction is potentially correctable, at least in some patients. Further intervention studies on this topic are urgently needed.

- 1. Spronk, P.E., et al., *Prevalence and characterization of dysphagia in hospitalized patients.* Neurogastroenterology & Motility, 2020. **32**(3): p. e13763.
- 2. Robinson, D.J., et al., *Oropharyngeal dysphagia in exacerbations of chronic obstructive pulmonary disease.* European Geriatric Medicine, 2011. **2**(4): p. 201-203.
- 3. Terada, K., et al., *Abnormal swallowing reflex and COPD exacerbations*. Chest, 2010. **137**(2): p. 326-32.
- 4. Steidl, E., et al., *Relationship between Dysphagia and Exacerbations in Chronic Obstructive Pulmonary Disease: A Literature Review.* International archives of otorhinolaryngology, 2015. **19**(1): p. 74-79.
- 5. Terzi, N., et al., *Noninvasive Ventilation and Breathing-Swallowing Interplay in Chronic Obstructive Pulmonary Disease**. Critical Care Medicine, 2014. **42**(3).
- 6. Gonzalez Lindh, M., et al., *Swallowing dysfunction in patients hospitalised due to a COPD exacerbation.* ERJ open research, 2021. **7**(2): p. 00173-2021.