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LETTER TO THE EDITOR

Reply to the Letter to the Editor regarding "Dysphagia in non-intubated patients affected by COVID-19 infection"

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Dear Editor,

We read with great attention the letter Sarmet et al. wrote in response to our article [1, 2]. We appreciate the interest the authors showed towards our research and the possibility they are providing us with to underline some aspects.

Their first concern is the absence of videofluoroscopic swallowing study (VFSS) in our research. It is important to consider that every instrumental examination should be carefully evaluated in SARS-CoV-2 hospital setting. In particular, both gold-standard diagnostic tools in dysphagia, flexible endoscopic evaluation of swallowing (FEES) and VFSS, show some limitations which should not be underestimated, since the first is an aerosol-generating procedure and the second needs to take into account restrictions about transporting patients from the ward to other hospital departments, with consequent increased potential virus transmission. The latter problem would also affect ultrasound imaging, whose employment was suggested by the authors even if it is not considered a gold-standard diagnostic tool for dysphagia and, in addition, not directly performable in every COVID-19 ward, requiring the involvement of personnel capable of performing ultrasound [3]. Hence, one of the main purposes of our study was to identify and test a clinical tool, which could empower bedside evaluation of swallowing disorders, allowing a better dysphagia assessment inside the ward, leading to a reduction of medical personnel involved in dysphagia evaluation and, therefore, exposed to potential contagion. Moreover, identifying a reliable tool would reduce the requests for VFSS and FEES and reserve them for limited specific cases. In this context, according to our results, Volume-Viscosity Swallow Test (VVST) proved to be valid in assessing dysphagia in non-intubated patients affected by COVID-19 infection. Furthermore, Sarmet and colleagues expressed doubts regarding some results of our research, especially about the interpretation of desaturation when performing a VVST: should it be considered to be caused by SARS-CoV-2, dysphagia or both? It is important to underline that VVST detects a desaturation that owns specific features: a decrease in oxygen saturation ≥ 3 must occur to be considered a significant predictor of aspiration. This reduction immediately follows the swallowing of tested bolus and is transitory, lasting not more than few seconds [4]. Thus, these characteristics allow an easy distinction between dysphagic desaturation and progressive, not temporary desaturation due to SARS-CoV-2. Moreover, we clearly reported that our study population was made up of asymptomatic patients positive tested for SARSCoV-2 RNA via RT-PCR who already overcame the acute phase of the disease and were, therefore, not showing any signs of oxygen desaturation. We understand that the lack of more detailed information regarding the patient's medical history, as well as any pulmonary and radiological examinations performed during the hospitalization could prevent a complete understanding of the influence of respiratory function on swallowing disorders. However, to avoid a confounding factor represented by intubation and to analyse a homogeneous sample, we only recruited patients who had suffered from a mild form of COVID-19 pneumonia, which did not require invasive ventilation. All computed tomographies confirmed mild pneumonia, while no patient performed spirometry, as most guidelines suggest limiting lung function tests to selected cases [5]. Moreover, as shown in the results, the need for oxygen therapy/non-invasive ventilation (NIV)

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during hospitalization did not significantly influence the onset of dysphagia.

As highlighted by Sarmet et al., further studies on larger samples would be useful to better clarify the pathophysiology of the observed dysphagia, possibly integrating objective investigations or analysing the outcomes of dysphagia in patients who had suffered from COVID-19, comparing those who had required invasive ventilation to those who did not require endotracheal intubation.

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Declarations

Conflict of interest The authors have no conflicts of interest to declare.

References

1. Sarmet M, Dorça A, Zeredo JL, Esquinas AM (2021) Letter to the editor regarding "dysphagia in non-intubated patients affected by COVID-19 infection." Eur Arch Otorhinolaryngol 24:1–2. https://doi.org/10.1007/s00405-021-07100-0
2. Grilli GM, Giancaspro R, Del Colle A, Quarato CMI, Lacedonia D, FoschinoBarbaro MP, Cassano M (2021) Dysphagia in non-intubated patients affected by COVID-19 infection. Eur Arch Otorhinolaryngol 1:1–7. https://doi.org/10.1007/s00405-021-07062-3
3. Brodsky MB, Gilbert RJ (2020) The long-term effects of COVID-19 on dysphagia evaluation and treatment. Arch Phys Med Rehabil 101(9):1662–1664. https://doi.org/10.1016/j.apmr.2020.05.006
4. Riera SA, Marin S, Serra-Prat M, Tomsen N, Arreola V, Ortega O, Walshe M, Clavé P (2021) A systematic and a scoping review on the psychometrics and clinical utility of the volume-viscosity swallow test (V-VST) in the clinical screening and assessment of oropharyngeal dysphagia. Foods 10(8):1900. https://doi.org/10.3390/foods10081900
5. Crimi C, Impellizzeri P, Campisi R, Nolasco S, Spanevello A, Crimi N (2021) Practical considerations for spirometry during the COVID-19 outbreak: literature review and insights. Pulmonology 27(5):438–447. https://doi.org/10.1016/j.pulmoe.2020.07.011