



Comment on “Comparison of pure tone audiometry thresholds and transient evoked otoacoustic emissions (TEOAE) of patients with and without Covid-19 pneumonia”

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We have read the article of Yildiz with great interest [1]. The author performed the study with 240 patients who were divided into three groups consisting of 80 patients each. The groups were the control (no disease), COVID-19 (non-pneumonia), Covid-19 (pneumonia) groups. The author performed PTA and TEOAE tests for each patient in different times during the study and calculated the mean of the two results performed in those times. In the summary of the results of this study, PTA results and TEOAE amplitudes in the first and third months were not found significantly different among the groups ($p > 0.05$). The author concluded that no significant changes were observed to indicate COVID-19-associated hearing loss.

There are studies that give contradictory results on this subject [2,3]. In the beginning of the pandemic, that was the intense stress atmosphere of that period, it was thought that the symptom of sudden hearing loss could be a symptom of COVID-19 and it has been suggested that sudden hearing loss may be the only symptom of SARS-CoV-2 infection [2]. However, different results were obtained in more planned and organized studies carried out in the following time. In one of these studies [3], patients who had audiological evaluations made just before the pandemic process and whose hearing results were normal, were evaluated during and after the COVID-19 infection, and a significant decrease in hearing level was found only at 1000 Hz.

However, we have some questions on the current study which need to be carefully considered. Our first determination is about Transient Evoked Otoacoustic Emission (TEAOE) test; according to our knowledge, it is not possible to make the measurements mentioned in the material method section and to obtain the results given in the results section with that model of the device (Maico-Easyscreen® device (Berlin, Germany)) that is said to have been used in the article. There is a possibility that the author has mistyped the device model. In addition, the TEOAE amplitudes in the table are not possible values. It was observed that the specified values were below the average. It might create an uncertainty whether the author wanted to give the emission amplitudes or the signal-to-noise ratios. We think that these issues need to be reevaluated, reviewed and corrected if necessary. Additionally, in the study, it was stated that 250-8000 Hz air and bone conduction hearing thresholds were determined by pure tone audiometry test in the patient and control groups. To eliminate the confusion here, it would be

appropriate if the types and brands of headphones used in the determination of air and bone conduction hearing thresholds and the characteristics of the test environment were specified. In addition, we think that measuring bone conduction hearing thresholds between 500 and 4000 Hz is sufficient. Lastly, while reporting the audiological data, it would be more appropriate to give the right and left ear data separately instead of giving the combined data.

Declaration of competing interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

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M. Tayyar Kalcioğlu^{a,b,*}, Basak Mutlu^c, Serdal Celik^d

^a Istanbul Medeniyet University, Medical Faculty, Department of Otorhinolaryngology, Istanbul, Turkey

^b Goztepe Prof. Dr. Suleyman Yalcin City Hospital, Istanbul, Turkey

^c Istanbul Medeniyet University, Faculty of Health Science, Department of Audiology, Istanbul, Turkey

^d Sarikamis State Hospital, ENT Clinic, Kars, Turkey

* Corresponding author at: Department of Otorhinolaryngology and Head and Neck Surgery, Istanbul Medeniyet University Faculty of Medicine, Istanbul, Dr. Erkin Street Kadikoy/Istanbul, Istanbul 34720, Turkey.

E-mail address: mahmut.kalcioğlu@medeniyet.edu.tr (M.T. Kalcioğlu).

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