
Letter to the Editor

In Reference to Association of Severe Tongue Edema With Prone Positioning in Patients Intubated for COVID-19

Dear Editor:

We read with interest the article by Walsh et al. and appreciate this study investigating prone position-related tongue edema in patients followed up in the intensive care unit.¹

However, we would like to contribute to this issue and present our criticisms of the authors' work.

The authors stated that their study was the first in the literature to examine tongue edema in detail. However, we would like to point out that we have three clinical, prospective studies in which tongue edema caused by the rigid direct laryngoscope used in suspension laryngoscopy in adult patients and tongue edema due to the high pressure exerted on the tongue by the tonsillar retractor and tongue depressor used in pediatric patients who underwent tonsillectomy and adenoidectomy surgery were detected by ultrasonography (USG).²⁻⁴

In addition, the entity of subacute submassive tongue edema as a different concept from massive tongue edema was defined by us for the first time in both adult and pediatric patients.^{2,4} Although they are similar in etiology, massive tongue edema can be noticed with the naked eye as the patient's tongue protrudes from his mouth, while subacute submassive tongue edema cannot be noticed with the naked eye. However, subacute submassive tongue edema can be diagnosed by measuring the cross-sectional area of the tongue with submental USG.^{2,4} Although Walsh et al. stated that they did not use a standardized rating tool in their study as a limitation of the study, we want to remind that submental USG is an objective, inexpensive, easily applicable, diagnostic, and therapeutic tool that can be used to detect tongue edema.²⁻⁴

And also, in patients with massive tongue edema, respiratory distress develops in a very short time after extubation, while respiratory distress due to subacute submassive tongue edema may occur 2.5 hours after extubation, especially in pediatric patients with a narrowed airway passage.^{3,4}

In addition, Aziz et al. examined the relationship between 1645 drugs and tongue edema, and they stated that 22 of them might be associated with tongue edema formation in addition to angiotensin-converting-enzyme inhibitors.⁵ It is noteworthy that beta-lactam antibiotics and carbapenems, which are frequently used in intensive care units, are associated with tongue edema.

A final point we would like to emphasize is that early diagnosis and rapid intervention are vital to prevent airway problems caused by tongue edema, regardless of the cause.

MERIH ONAL, MD 

Department of Otorhinolaryngology, Selcuk University Faculty of Medicine, Konya, Turkey

OZKAN ONAL, MD 

Department of Outcomes Research, Cleveland Clinic, Anesthesiology Institute, Cleveland, Ohio, U.S.A.
Department of Anesthesiology and Reanimation, Selcuk University Faculty of Medicine, Konya, Turkey

The authors declare that they have no conflict of interest or financial disclosure.

BIBLIOGRAPHY

1. Walsh A, Peesay T, Newark A, et al. Association of severe tongue edema with prone positioning in patients intubated for COVID-19. *Laryngoscope* 2022;132:287-289. <https://doi.org/10.1002/lary.29773>.
2. Onal M, Colpan B, Elsurur C, Bozkurt MK, Onal O, Turan A. Is it possible that direct rigid laryngoscope-related ischemia-reperfusion injury occurs in the tongue during suspension laryngoscopy as detected by ultrasonography: a prospective controlled study. *Acta Otolaryngol* 2020;140:583-588. <https://doi.org/10.1080/00016489.2020.1743353>.
3. Onal M, Colpan B, Elsurur C, et al. Can tonsillar retractor-induced tongue edema be a new complication in pediatric patients undergoing tonsillectomy detected by ultrasonography? A prospective, case-controlled, observational study. *Ear Nose Throat J* 2020;145561320934918. <https://doi.org/10.1177/0145561320934918>.
4. Onal M. Assessment of tongue depressor-related tongue swelling in pediatric patients with ultrasonography: a prospective, case-controlled observational study. *Med Sci* 2021;10:13-17. <https://doi.org/10.5455/medscience.2020.09.180>.
5. Aziz Y, Rademacher WMH, Hielema A, et al. Oral adverse effects: drug-induced tongue disorders. *Oral Dis* 2021;27:1528-1541. <https://doi.org/10.1111/odi.13680>.

Send correspondence to Ozkan Onal, Department of Anesthesiology and Reanimation, Selcuk University Faculty of Medicine, Konya 42100, Turkey; Department of Outcomes Research, Cleveland Clinic, Anesthesiology Institute, Cleveland, OH 44195-5243. E-mail: drozkanonal@selcuk.edu.tr, onali@ccf.org

DOI: 10.1002/lary.29949