



Reply to: Letter to the editor regarding “Long-term intubation and high rate of tracheostomy in COVID-19 patients might determine an unprecedented increase of airway stenoses: a call to action from the European Laryngological Society” by Piazza et al

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Dear Editor,

We read the Letter by Fiacchini et al. and strongly appreciated the authors' effort to hypothesize new pathological mechanisms which are responsible for the high rates of laryngotracheal junction injuries observed in patients affected by COVID-19 and submitted to prolonged intubation for management of related pneumonia. Although there are data available in the literature concerning COVID-19-associated coagulopathy, to date no documented cause-effect relationships with laryngotracheal mucosa and framework damage have been reported. Notwithstanding, this issue and the possible role of intraepithelial high viral load in the airway merit prospective studies in this population at high-risk for developing laryngo-tracheal stenosis (LTS). However, as reported in our paper [1], the main etiopathogenetic mechanism responsible for the increased incidence of LTS in COVID-19 patients managed in the intensive care unit seems to be prolonged endotracheal intubation (possibly causing mucosal ulceration, granulomas, and webs),

with the subsequent addition of further damage from tracheostomy (determining tracheal rings fracture, collapse, necrosis, malacia, and superinfection). To try to avoid these kinds of airway injuries, it is of paramount importance to prevent the use of large-caliber tubes and to keep safe cuff pressure values between 20 and 30 cm H₂O, as generally recommended in every pre-COVID-19 anesthesiologic and intensivists good practice guidelines. In fact, although such attention is routinely made in daily clinical practice, during the pandemic the primary health emergency and shortage of experienced personnel may have determined misconduct in the management of such complicated clinical scenarios, with use of tubes larger than normal, whose cuff had been inflated with high pressure, all maintained in place for an undue long period of time. Even now, an international consensus concerning the correct timing of tracheostomy is lacking, while high heterogeneity in national guidelines and protocols persists. In fact, European guidelines [2, 3] push for a more aggressive approach with an early tracheostomy, as opposed to North American [4], Canadian [5], and others advocating more conservative management, with delayed tracheostomy waiting for at least 14 days after orotracheal intubation or a negative COVID-19 test. The obvious (but undemonstrated) benefit of such a wait-and-see policy would be to reduce the risk of contamination of healthcare workers: an argument preventable by the adequate use of personal protective equipment, if not by the recently accomplished vaccination program. Moreover, none of the above-mentioned guidelines discusses the advantages of performing early tracheostomy in COVID-19 patients: in fact, if it does not offer a dramatic benefit in ventilator weaning, it would undoubtedly reduce the complications from prolonged intubation.

In conclusion, underlying the fact that prolonged intubation (with delayed tracheostomy) represents the leading cause of the increased incidence of LTS in COVID-19

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patients, we reinforce our recommendations to follow good practice guidelines in place before the pandemic: in no way should such rules in use during the pre-COVID-19 era be changed in the days to come.

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Declarations

Conflict of interest The authors declare that they have no conflict of interest.

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