only occur after the loss of the gag and protective airway reflexes. Some anesthesiologists would also be concerned that stopping any pre-oxygenation before anesthetic induction, or preventing the ability to perform bag/valve/mask ventilation, would result in an inevitable reduction in patient airway safety; of note, the period of time without oxygenation may be slightly shortened with LM priming maneuver (as it avoids the need to opening the mouth by the anesthesiologist resulting in lower time without ventilation). Notably, the anesthesiologists insert the LM after a standard pre-oxygenation without prior bag/valve/mask ventilation, in multiple occasions, concerned with its risks , being frequently the most used mode of LM insertion, as such nothing will be modified about the lack of manual ventilation with this technique in most cases.

Should we perform this technique in all the patients? The answer is certainly: not necessarily, but a significant number of patients will benefit from it. In common clinical cases it is hard to demonstrate the benefits of this mode of insertion of the LM, nevertheless it may be adopted, at least, in those mentioned clinical situations given the lack of significant complications associated to the technique and the high potential gain. A description in the literature of a similar LMP technique, to our best knowledge, has not yet been reported.

I would like to launch a challenge to the readers: a large prospective study, eventually multicentric, may be undertaken comparing the LMP method to the traditional mode of insertion in both supine or lateral decubitus position in relation to the following outcomes 1) the time from stopping pre-oxygenation to the first wave of EndTidal CO_2; 2) the rate of success on the first attempt; 2) the incidence of gag reflex; 3) the need of unplanned administration of muscular relaxant or additional hypnotic drug; 4) the difficulty in the mouth opening; 5) the need to insert at least an operator's finger inside the mouth; 6) the incidence of desaturation.

There is the possibility that larger differences in some outcomes are more likely found in the patients in which the LM insertion is done in lateral decubitus or in the high-risk subgroups of patients.

The LMP mode of insertion in a patient previously placed prone position, may be useful, but the advantages/risks of the LM use in that position are obviously highly controversial.

Conflicts of interest

The author declares no conflicts of interest.

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Inefficient humidification as the cause of noninvasive ventilation failure in COVID-19 patients

Dear Editor,

Five to six percent of COVID-19 patients developed acute hypoxemia respiratory failure.[1] The hypoxemia might not respond to high-flow nasal cannula therapy (HFNC), and eventually require escalation of oxygen therapy to continuous positive airway pressure (CPAP) or noninvasive ventilation (NIV). Patients who failed NIV had high minute ventilation, which may be due to increased alveolar dead space, increased CO2 production from the inflammatory response and impaired carbon dioxide clearance, or both.[2] Successful NIV leads to more patient comfort, reduced ventilatory work of breathing, decreased chest wall motion and minute ventilation, improvement in arterial oxygen saturation, and dyspnea resolution. Patients on NIV frequently complain of dry mouth. Because of ineffective humidification and high minute ventilation, COVID-19 patients develop dry and thick bronchial secretions, which might lead to airway obstruction. This also results in increased requirements of airway procedure like bronchoscopy or endotracheal tube replacement in COVID-19 patients. There is lack of clear guideline or recommendation regarding the appropriate humidification application during NIV, as this is poorly understood.

Either of the two humidification systems, heated humidification (HH), or a heat and moisture exchange filter (HME) is used for NIV. The humidification system's selection should be based on the patient's lung condition, ventilator settings, intended duration of use, and other factors like the presence of leaks and body temperature. Switching from HME to HH was found to be associated with a significant decrease in PaCO2 levels. Many centers use filters to provide passive humidification and reduce the risk of exhaled gas/aerosol dispersion during NIV.[3] In our clinical experience, we have found better results in patients with prolonged NIV who were switched from HME to HH. Few patients who were on CPAP mode of NIV for more than five days (HME filter attached) were observed to be noncompliant with complains of dry throat. All these patients required high FiO2 (0.6 to 0.8) with

high minute ventilation (12–15 L.min^{-1}). In these patients, we changed the humidification system from HME to HH. The patients became more compliant to the NIV with better synchrony and sputum clearance. We were able to wean all patients in due course of 15 to 20 days.

During invasive ventilation, the natural humidification system of the upper airway is bypassed. Theoretically 30 mg $H_2O.L^{-1}$ is the minimum humidity required for ventilation[4]; however, it is not clear whether the same is required during NIV. The minimum absolute humidity during NIV is 15 mg $H_2O.L^{-1}$.[5] If no humidification is used, the absolute humidity during NIV comes down to 5 mg $H_2O.L^{-1}$.[4] Lellouche et al.[5] stated that if mask leak is present, humidification dropped by 30% when HME is used, but remained the same with heated humidifier.

An international survey was conducted by Esquinas et al.[4] to determine humidification practices and its relationship with untoward outcomes during NIV. They found that in NIV failure patients, difficult intubation was encountered in 5.4%. It stated that in 50% of this subgroup of patients, no humidification system was used during NIV.

Hence, we suggest regular use of active humidification (heated wire) in COVID-19 patient, as humidification improves airway function by clearing secretion from the airway. This would result in increased comfort to the patient, increases NIV tolerance, and prevent the creation of a challenging environment for endotracheal tube placement.

There is a lack of clear guideline or recommendation regarding the appropriate humidification application to COVID-19 ARDS patients during NIV. Different humidification methods applied for intubated patients cannot be extrapolated to NIV. A well-structured comparative study between humidification versus ambient air during NIV will answer the question.

Conflicts of interest

The authors declare no conflicts of interest.

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Videolaryngoscopes: not only for endotracheal intubation

Dear Editor,

Advances in technology enable healthcare professionals to solve problems faster and more easily with lower complication rates. Following the introduction of videolaryngoscopes in clinical practice, increase in success and decrease in complication rates in the management of difficult endotracheal intubation were achieved within a short period, causing rapid popularization of these devices. Even though originally developed for difficult intubation, they quickly entered into routine practice due to their handling similarity to classic laryngoscopes, ease of use and their facilitative properties to 3D image adaptation.[1] Because of these features, videolaryngoscopes are frequently used in areas outside the operating room such as emergency services, ambulances, or intensive care units[2] as well as diagnosing and/or solving various problems in the mouth, pharynx, and larynx.[1] Studies on the use of videolaryngoscopes for different purposes other than endotracheal intubation appear more frequently in the literature, such as intraoral examination and/or small interventions, placement of TEE probe, endoscope or nasogastric tube, assistance for flexible tracheoscopic intubation, providing exposure for laryngeal surgery or nasotracheal intubation.[1–3] In this letter, we wanted to share the various uses of videolaryngoscopes in our clinical practice apart from routine endotracheal intubation, as shown below, and present the pictures of a case (Fig. 1) we considered most unusual.

- Assisting nasotracheal intubation
- Control of vocal cord movements after thyroid operations
- Securing the proper placement of electromyographic tube before thyroidectomy
- Control and removal of foreign bodies
- Placement or correcting malpositions of nasogastric tube