

Macintosh laryngoscope: time for retirement?



Dear Editor,

One of the most long-lived medical instruments still in use, the Macintosh laryngoscope is present in trauma rescue teams, emergency rooms, intensive care units and surgical centers.

Developed in the 1940s by Sir Robert Macintosh, a British anesthesiologist, its revolutionary design with the curved blade allowed the elevation of the epiglottis and visualization of the vocal cords without the need for an anesthetic plan as deep as the others available at the time, especially before the advent of neuromuscular blockers being a great advantage.¹ Nowadays, 80 years after its launch, it is the gold standard instrument and most used worldwide in airway management.¹

Impossibility of ventilation and maintenance of oxygenation due to difficulties in managing the airways and tracheal intubation remain important factors for increasing morbidity and mortality in the perioperative period, even with the advent of algorithms and new techniques and equipment, including videolaryngoscopes.²

When compared to conventional laryngoscopy, videolaryngoscopes are associated with less trauma to the airways, however the success in tracheal intubation does not appear to be different.

Different variables such as the location of the intubation (intensive care, emergency room), difficult airway planned in advance, type of patient (obese), objectives (success in intubation, maintenance of oxygenation), need for medical training as well as the planning of team strategies³ cause bias and hinder the analysis between studies that compare conventional laryngoscopy with videolaryngoscopy. Conflicting results between different brands and types of videolaryngoscopes and large differences in market prices also make it necessary to individualize the devices.

First choice for tracheal intubation, the Macintosh laryngoscope was replaced by videolaryngoscopes in times of the COVID-19 pandemic.⁴ Anesthesia societies worldwide have made this recommendation to decrease the risk of contagion among healthcare professionals at the time of intubation, because videolaryngoscopes allow a greater distance between the attending physician and the patients' airways – 35.6 (9.9) cm versus 16.4 (11.1) cm, with no difference in intubation time.⁴

Despite questionable superiority in the literature, concerning the patient and health professionals, could the conventional laryngoscope be considered obsolete?

Perhaps it is too early to say because it is very difficult to specify the timing of the contamination, although there is a direct relationship between the performance of tracheal intubation and the appearance of symptoms of COVID-19 among the doctors involved in the procedure, until now it has not been possible to compare the risks with the airway management technique.⁵

Our impression is that it is of paramount importance that videolaryngoscopes are available as an alternative in the various care scenarios, and that there is adequate training for all those involved for their safety and best result in orotracheal intubation.

Conflicts of interest

The authors declare no conflicts of interest.

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Received 15 August 2020; accepted 29 November 2020

<https://doi.org/10.1016/j.bjane.2020.11.008>

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