

- of sedoanalgesia and delirium in critically ill adult patients. *Med Intensiva*. 2020;44:171–84.
7. Devlin JW, Skrobik Y, Gélinas C, Needham DM, Slooter AJC, Pandharipande PP, et al. Clinical practice guidelines for the prevention and management of pain, agitation/sedation, delirium immobility, and sleep disruption in adult patients in the ICU. *Crit Care Med*. 2018;46:e825–73.
  8. Zorrilla-Vaca A, Healy RJ, Wu CL, Grant MC. Relation between bispectral index measurements of anesthetic depth and post-operative mortality: a meta-analysis of observational studies. *Can J Anaesth*. 2017;64:597–607.
  9. Nieuwenhuijs-Moeke GJ, Jainandunsing JS, Struys MMRF. Sevoflurane, a sigh of relief in COVID-19? *Br J Anaesth*. 2020. S0007-0912(20)30299-3.

10. Jerath A, Ferguson ND, Cuthbertson B. Inhalational volatile-based sedation for COVID-19 pneumonia and ARDS. *Int Care Med*. 2020:1–4.

V. Jean-Michel, T. Caulier, P.-Y. Delannoy, A. Meybeck, H. Georges\*

*Intensive Care Unit, Centre Hospitalier de Tourcoing, Tourcoing, France*

\* Corresponding author.

E-mail address: [hgeorges@ch-tourcoing.fr](mailto:hgeorges@ch-tourcoing.fr) (H. Georges).

<https://doi.org/10.1016/j.medin.2020.07.013>

0210-5691/ © 2020 Elsevier España, S.L.U. y SEMICYUC. All rights reserved.

## Use of the video laryngoscopy in intensive care units



## Uso de la videolaringoscopia en las unidades de cuidados intensivos

Dear Editor,

We have carefully read the interesting study by Dey et al.<sup>1</sup> comparing the use of the C-MAC video laryngoscope versus the Macintosh laryngoscope. We congratulate the authors for this. Several appreciations may be of interest.

In the methodological aspect, the absence of registration of the airway characteristics (for example, use of the MACOCHA scale) is a significant bias as the authors indicated since it does not guarantee the comparability of both groups. Moreover, the critically ill patient is characterized by a limited physiologic reserve, so the variable “time” as well as the success rate of each device, has a significant clinical impact.<sup>2</sup> In other words, success is not enough. It must be obtained in the shortest time; otherwise, it may increase morbidity and mortality secondary to hypoxia.<sup>3</sup> It is recommended in clinical practice to reduce the number of attempts to three as well as the instrumentalization time to avoid progression to a “cannot intubate cannot oxygenate” situation and to opt for alternative methods or devices in the event of a failed primary attempt.<sup>4</sup> The authors do not specify the local algorithm followed when failed intubation was declared, which is important. The study determined that the C-MAC required significantly more times a stylet to perform tracheal intubation. It is necessary to remember that there are several case reports of the upper airway injury secondary to its use as an adjuvant.

Currently, the routine use of video laryngoscopy<sup>5</sup> is defended in order to perform atraumatic tracheal intubations in the shortest time, although it is important to take care of two aspects; the experience and the type of device selected according to the context; otherwise, the results may differ from those expected.<sup>5</sup> Thus, video laryngoscopes with Macintosh blade such as C-MAC (Karl Storz, Tuttlingen, Germany) or McGrath MAC (Aircraft Medical,

Edinburgh, United Kingdom) allow both direct and indirect laryngoscopy, making them the most appropriate for routine use, while those with a hyperangulated blade with or without a guide channel are reserved to treat the difficult airway as first choice or as a rescue device.<sup>5</sup> There are many reasons that justify the use of a video laryngoscope as a primary device<sup>5</sup>; they allow direct and indirect laryngoscopy in the case of those who have a Macintosh blade as previously exposed, reduce the incidence of an unanticipated difficult airway, optimize training by allowing instructions from a more experienced operator, maximize coordination of the team, allow the recording of the procedure, reduce the possibility of cross-infection when using disposable material and allow a greater distance from the operator with the airway of the patient.<sup>6</sup>

There are limited number of clinical trials on video laryngoscopy in critically ill patients. Similar multicenter studies are necessary to obtain more evidence in this setting.

## Conflicts of interest

The authors declare no conflicts of interests.

## References

1. Dey S, Pradhan D, Saikia P, Bhattacharyya P, Khandelwal H, Adarsha KN. Intubation in the Intensive Care Unit: C-MAC video laryngoscope versus Macintosh laryngoscope. *Med Intensiva*. 2020;44:135–41.
2. Cook TM. Strategies for the prevention of airway complications – a narrative review. *Anaesthesia*. 2018;73:93–111.
3. Yeatts DJ, Dutton RP, Hu PF, Chang YW, Brown CH, Chen H, et al. Effect of video laryngoscopy on trauma patient survival: a randomized controlled trial. *J Trauma Acute Care Surg*. 2013;75:212–9.
4. Higgs A, McGrath BA, Goddard C, Rangasami J, Suntharalingam G, Gale R, et al. Guidelines for the management of tracheal intubation in critically ill adults. *Br J Anaesth*. 2018;120:323–52.
5. Gómez-Ríos MA, Sastre-Rincon JA, Mariscal-Flores M. Is direct laryngoscopy dead? Long live the video laryngoscopy. *Rev Esp Anestesiol Reanim*. 2019;66:177–80.

6. Hall D, Steel A, Heij R, Eley A, Young P. Videolaryngoscopy increases 'mouth-to-mouth' distance compared with direct laryngoscopy. *Anaesthesia*. 2020;75:822–3.

M.Á. Gómez-Ríos<sup>a,b,\*</sup>, R. Casans-Francés<sup>c</sup>,  
A. Abad-Gurumeta<sup>d</sup>, A.M. Esquinas<sup>e</sup>

<sup>a</sup> *Departamento de Anaesthesiología y Medicina Perioperatoria, Complejo Hospitalario Universitario de A Coruña, A Coruña, Spain*

<sup>b</sup> *Anesthesiology, Perioperative Medicine and Pain Management Research Group, Grupo Español de Vía Aérea Difícil (GEVAD), Spain*

<sup>c</sup> *Departamento de Anestesiología, Hospital Universitario Infanta Elena, Valdemoro, Madrid, Spain*

<sup>d</sup> *Departamento de Anestesiología y Medicina Perioperatoria, Hospital Universitario Infanta Leonor, Madrid, Spain*

<sup>e</sup> *Unidad de Cuidados intensivos y Ventilación No Invasiva, Hospital General Universitario Morales Meseguer, Murcia, Spain*

\* Corresponding author.

E-mail address: [magoris@hotmail.com](mailto:magoris@hotmail.com) (M.Á. Gómez-Ríos).

<https://doi.org/10.1016/j.medin.2020.04.020>

0210-5691/ © 2020 Elsevier España, S.L.U. y SEMICYUC. All rights reserved.