

M.A. Gómez-Ríos<sup>a,b,c</sup>

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

<sup>b</sup> *Departamento de Anestesiología, Hospital HM Modelo, A Coruña, Spain*

<sup>c</sup> *Grupo de Anestesiología y Tratamiento del Dolor, Instituto de Investigación Biomédica de A Coruña (INIBIC), A Coruña, Spain*  
E-mail address: [magoris@hotmail.com](mailto:magoris@hotmail.com)  
2173-5727/

© 2018 Elsevier España, S.L.U. and SEMICYUC. All rights reserved.

## Reply to the letter ‘‘Airway management in intensive care units’’<sup>☆</sup>



### Respuesta a la carta «Manejo de la vía aérea en las unidades de cuidados intensivos»

Dear Sir,

First of all, we wish to thank Gómez-Ríos et al. for their comments,<sup>1</sup> and for their interest in our work. Their letter comments on different aspects of our survey, and data from it are used to continue placing emphasis on the existence of major problems in relation to airway management in the critical patient.

We wish to underscore that although there has been an increase in the number of publications in this field in recent years, no specific management guides referred to critical care were forthcoming until the publication in 2017 of the British guidelines by the *Difficult Airway Society* (DAS).<sup>2</sup> These guidelines appeared in parallel to our own survey; consequently, we were unable to make any mention of them. Nevertheless, our findings have revealed that there is considerable room for improvement in airway management in the ICU; in this respect, the availability of recommendations for homogenizing such management may have an effect upon critical patient morbidity-mortality. Subsequent studies will be needed to evaluate the impact of these recommendations in routine clinical practice.

The evaluation of predictors of difficult intubation is useful in the planning of rescue strategies, making it possible to shorten the intervention times in the event of complications.<sup>3</sup> The use of combined predictors has been shown to afford increased sensitivity and specificity in detecting a difficult airway compared with the use of a single predictor.<sup>4</sup> In recent years, some studies have demonstrated the validity of the MACOCHA scale in the ICU<sup>5</sup>; nevertheless, the assessment of airway anatomy in the critically ill is usually difficult due to the scarce func-

tional reserve and instability of these patients. Instruments such as the Mallampati scale (included in the MACOCHA scale with a high score) may prove difficult to apply. Despite this, and even in emergency situations, the existence of difficult airway predictors must be taken into account.

Capnography is very important for discarding failed intubation by corroborating correct positioning of the endotracheal tube. Although it is widely used in the intra-operative setting, we admit that the lack of an item asking about the availability of capnography is one of the weaknesses of our survey – its use having been recommended since the publication of the NAP4.<sup>6</sup>

In conclusion, while much remains to be done in airway management in the ICU, the fact that recommendations for routine clinical practice are becoming available may imply changes in terms of patient morbidity-mortality. Further studies will be needed to evaluate the impact of these recommendations and to establish new critical airway management protocols.

## References

- Gómez-Ríos MA. Manejo de la vía aérea en las unidades de cuidados intensivos. *Med Intensiva*. 2019;43:187–8.
- 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.
- Merah NA, Wong DT, Ffoulkes-Crabbe DJ, Kushimo OT, Bode CO. Modified Mallampati test, thyromental distance and inter-incisor gap are the best predictors of difficult laryngoscopy in West Africans. *Can J Anaesth*. 2005;52:291–6.
- Lavery GG, McCloskey BV. The difficult airway in adult critical care. *Crit Care Med*. 2008;36:2163–73.
- De Jong A, Molinari N, Terzi N, Mongardon N, Arnal JM, Guitton C, et al., AzuRéa Network for the Frida-Réa Study Group. Early identification of patients at risk for difficult intubation in the intensive care unit: development and validation of the MACOCHA score in a multicenter cohort study. *Am J Respr Crit Care Med*. 2013;187:832–9.
- Cook TM, Woodall N, Harper J, Benger J, Fourth National Audit Project. Major complications of airway management in the UK: results of the fourth national audit project of the Royal College of Anaesthetists and the Difficult Airway Society. Part 2: Intensive care and emergency departments. *Br J Anaesth*. 2011;106:632–42.

<sup>☆</sup> Please cite this article as: Gómez-Prieto MG, Marmesat-Ríos I, Garnacho-Montero J. Respuesta a la carta «Manejo de la vía aérea en las unidades de cuidados intensivos». *Med Intensiva*. 2019;43:186–187.

M.G. Gómez-Prieto, I. Marmesat-Ríos,  
J. Garnacho-Montero\*

Unidad Clínica de Cuidados Intensivos, Hospital  
Universitario Virgen Macarena, Sevilla, Spain

\*Corresponding author.

E-mail address: [jgarnachom@gmail.com](mailto:jgarnachom@gmail.com)  
(J. Garnacho-Montero).

2173-5727/

© 2019 Published by Elsevier España, S.L.U.

## Mechanical thrombectomy in acute ischemic stroke, knowing our results<sup>☆</sup>



### Trombectomía mecánica en el ictus isquémico agudo, conociendo nuestros resultados

Dear Editor,

After reading with interest the article recently published on *Medicina Intensiva* by Viña-Soria et al.<sup>1</sup> “Results and functional outcomes of acute ischemic stroke patients who underwent mechanical thrombectomy” (“*Resultados y evolución funcional de pacientes críticos con ictus isquémico sometidos a trombectomía mecánica*” in Spanish), we would like to make a few contributions here.

This paper shows the outcomes of a pioneering unit in Spain where they have been prescribing endovascular treatment (EVT) to treat acute ischemic stroke patients for quite a few years. This therapy that has recently proven superior to therapy with systemic fibrinolysis only.<sup>2</sup>

Intensivists play a fundamental role in the management of neuro-critically ill patients and, in our opinion, they should be part of the management and decision-making process regarding therapy.

The series published by Viña-Soria et al. includes a one-year follow-up of 60 patients with stroke plus an indication for EVT admitted to our intensive care unit (ICU) from 2012 through 2014 (29% of the total number of patients treated according to the applicable criteria); patients in poor neurological condition and/or needing support therapy at the discretion of the treating neurologist. A priori this may seem like a limitation to extrapolate these outcomes to the clinical practice given the lack of a specific inclusion criterion.

The management of this condition is evolving rapidly with constant updates of clinical guidelines – the most recent ones published back in January 2018.<sup>3</sup> The actual indication for EVT (up to 24h after symptom onset) is significantly less strict than the one shown in this series. On the other hand, fibrinolysis should be prescribed as long as it has an indication and only if it does not delay the implementation of the EVT and without having to wait for the patient’s clinical response. Recent studies suggest

the benefits of combined therapy showing a higher percentage of good functional outcomes, fewer complications and lower mortality rates.<sup>4</sup> As a matter of fact, the study conducted by Viña-Soria et al. shows a low rate of fibrinolysis compared to other studies published on this regard.

Our ICU provides care to all patients with strokes who are eligible for reperfusion. In a series analyzed from December 2016 through December 2017, 206 patients were admitted to the ICU: 42% (86 patients) received fibrinolysis, 23% (47 patients) combined therapy, and 35% (73 patients) underwent thrombectomy procedures only. As the outcomes published by Viña-Soria show, patients treated with EVT experience better clinical and functional improvement. In our series, functional improvement in the group of patients who received combined therapy was particularly remarkable compared to the group of patients who received thrombectomy only, mRS  $\leq 2$  of 52% in the former group versus 27% in the second group, and a lower mortality rate 4% versus 15%, respectively. These findings are consistent with the aforementioned studies.<sup>5</sup>

In our opinion, the data published are valuable, especially including a one-year follow-up, yet they could be more useful if they showed the global outcomes of all patients treated with EVT and if these outcomes actually vary compared to patients treated according to the new recommendations. It would be interesting to conduct one multicenter study with a sample large enough to be able to draw conclusions on the managements and outcomes of strokes treated with EVT.

## References

- Viña Soria L, Martín Iglesias L, López Amor L, Astola Hidalgo I, Rodríguez García R, Forcelledo Espina L, et al. Results and functional outcomes of acute ischemic stroke patients who underwent mechanical thrombectomy admitted to intensive care unit. *Med Intensiva*. 2018;42:274–82 [in English, Spanish].
- Powers WJ, Derdeyn CP, Biller J, Coffey CS, Hoh BL, Jauch EC, et al., American Heart Association Stroke Council. 2015 American Heart Association/American Stroke Association focused update of the 2013 guidelines for the early management of patients with acute ischemic stroke regarding endovascular treatment: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2015;46:3020–35.
- Powers WJ, Rabinstein AA, Ackerson T, Adeoye OM, Bambakidis NC, Becker K, et al., American Heart Association Stroke Council. 2018 guidelines for the early management of patients with acute ischemic stroke: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke*. 2018;49:e46–110.

<sup>☆</sup> Please cite this article as: Pino Sánchez F, Fernández Carmon A, Muñoz Marina MV, Fernández Mondéja E. Trombectomía mecánica en el ictus isquémico agudo, conociendo nuestros resultados. *Med Intensiva*. 2019;43:187–188.