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LETTERS TO THE EDITOR

Airway management in intensive care units☆

Manejo de la vía aérea en las unidades de cuidados intensivos

Dear Editor,

We wish to congratulate Gómez-Prieto et al.[1] for their nationwide survey on airway management (AM) and also make a few contributions while insisting on how important it really is.

The NAP4 was a turning point after proving that different factors contributed to AM-induced mortality/brain damage whose incidence rate in intensive care units (ICU) is 55 times higher compared to intraoperative settings.[2] We hereby draw a comparison between factors regarding the critically ill patients and findings from the survey shown between brackets.

The human factor – present in up to 4.5 factors on average per case – the lack of prior assessments and deficient planning; several attempts and delays when transitioning to the invasive cervical approach can be found in the most dramatic cases of all. Other contributing factors are the absence of pre-established strategies (protocols, absent in up to 77% of the ICUs surveyed) and sub-optimal training. Clinical guidelines and algorithms have changed the medical practice and stimulated the culture of ''planning'' and they are used as cognitive support in critical situations to increase the level of safety.[3] We should say here that the DAS has recently published a clinical guideline/specific algorithm for the AM of critically ill patients that will surely become a reference tool.[4] The prior assessment of the airway (absent in 22.8%) is indicated even in the most urgent situations.[4] We are lacking the use of the MACOCHA score in the survey though – the only one that has been validated in critical care settings. Similarly, it seems undeniable that there is this need for continuous medical training (53.5%) in technical and non-technical skills (team work, leadership or the right progression of the interventions) and in the simulation of unexpected and unusual scenarios.

Regardless of the existing heterogeneity in the devices selected for AM among different institutions, today it is recommended to have one device for primary use available plus one alternative only in order to avoid cognitive overload and facilitate the decision-making process. The actual recommendations indicate that video laryngoscopes (53.5%) and second-generation laryngeal masks (%?) should be available wherever AM is a common practice.[4,5] It is surprising to see that angulated-blade video laryngoscopes are everybody's choice to the detriment of standard-blade video laryngoscopes. There is evidence that the use of the former (GlideScope® and McGrath® MAC) in critical care may increase morbimortality though.

It is also striking to see that the use of capnography has not been assessed given it is responsible for over 70% of all deaths in the ICU setting[2] and its universal implementation in ICUs has been considered the only change that is powerful enough to avoid mortality.[2] This is so because it allows us to diagnose early failed intubations and accidental displacements of cannulas and endotracheal tubes.

We need a major overhaul to match the actual practice to the actual recommendations. As professionals from different fields of expertise we have the possibility of meeting Bromiley's request[6] of managing airways safe and securely. Articles such as this one conducted by Gómez-Prieto et al.[1] are key if we really want to make a change.

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Reply to the letter ''Airway management in intensive care units''☆

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,[1] 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).[2] 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.[3] 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.[4] In recent years, some studies have demonstrated the validity of the MACOCHA scale in the ICU[5]; nevertheless, the assessment of airway anatomy in the critically ill is usually difficult due to the scarce functional 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 intraoperative 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.[6]

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.

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