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LETTER TO THE EDITOR

Chlorhexidine and ventilator-associated pneumonia

Clorhexidina y neumonía asociada al ventilador

Dear Editor,

We have read the article published by Cruz et al.¹ with great interest, whose results support that oral hygiene with chlorhexidine in patients on invasive mechanical ventilation (IMV) reduces the incidence rate of ventilator-associated pneumonia (VAP) without having an impact on their mortality. We would like to emphasize the importance of oral hygiene with chlorhexidine in critically ill patients on IMV.

In recent years, chlorhexidine has been stigmatized due to a possibly higher mortality rate in non-cardiac surgical patients on IMV,^{2,3} a greater impact on reducing VAP in cardiac surgery patients, and no reduction in the incidence of VAP in non-cardiac surgery patients.³ This has led to its optional use in VAP prevention bundles. However, it remains a pharmacological measure for VAP prevention with moderate evidence and a strong recommendation grade according to the updated clinical practice guidelines of the Pneumonia Zero campaign.⁴ Although VAP prevention strategies are multimodal it is crucial to reduce oropharyngeal colonization and prevent the passage of microorganisms (micro-aspiration) into the subglottic region and lower respiratory tract, a phenomenon known as transcolonization.⁵

The article published by Cruz compiles the evidence available from randomized clinical trials using chlorhexidine to reduce microbial load in the oropharynx. As it happens in other studies, there is variability in the concentration of chlorhexidine used, ranging from 0.12% to 2% that, however, does not affect the final outcome of this study. Similarly, there is variability in the way this antiseptic is used as part of oral hygiene protocols. Based on the evidence currently available, we believe that oral hygiene with chlorhexidine should continue to be a valid option, following a standardized protocol, in patients on invasive mechanical ventilation. It is a cost-effective resource accessible to all health centers that has proven beneficial in VAP preven-

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tion, especially in countries with low-to-medium economic resources where other preventive measures may be more expensive.

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Conflicts of interest

None declared.

References

- Cruz JC, Martins CK, Piassi JEV, García IR Jr, Santiago JF Jr, Faverani LP. Does chlorhexidine reduce the incidence of ventilatorassociated pneumonia in ICU patients? A systematic review and meta-analysis. Med Intensiva (Engl Ed). 2023;47:437–44, http://dx.doi.org/10.1016/j.medine.2022.11.002.
- Price R, MacLennan G, Glen J, SuDDICU. Selective digestive or oropharyngeal decontamination and topical oropharyngeal chlorhexidine for prevention of death in general intensive care: systematic review and network meta-analysis. BMJ. 2014;348:g2197, http://dx.doi.org/10.1136/bmj.g2197.
- Klompas M, Speck K, Howell MD, Greene LR, Berenholtz SM. Reappraisal of routine oral care with chlorhexidine gluconate for patients receiving mechanical ventilation: systematic review and meta-analysis. JAMA Intern Med. 2014;174:751–61, http://dx.doi.org/10.1001/jamainternmed.2014.359.
- Arias-Rivera S, Jam-Gatell R, Nuvials-Casals X, Vázquez-Calatayud M. Equipo Neumonía Zero. Actualización de las recomendaciones del proyecto Neumonía Zero. Enferm Intensiva. 2022;33:S17–30, http://dx.doi.org/10.1016/j.enfi.2022.05.005.
- Soussan R, Schimpf C, Pilmis B, Degroote T, Tran M, Bruel C, et al. Ventilator-associated pneumonia: the central role of transcolonization. J Crit Care. 2019;50:155-61, http://dx.doi.org/10.1016/j.jcrc.2018.12.005.

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