

COMPARISON OF DEXMEDETOMIDINE IN RELATION TO PROPOFOL IN REGARD TO THE HEMODYNAMIC PARAMETERS OF ICU PATIENTS: A LITERATURE REVIEW

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Keywords: Sedation, ICU, Dexmedetomidine.

INTRODUCTION

The use of non-benzodiazepine agents, such as propofol and dexmedetomidine, are the first-line drugs for sedation in Intensive Care Units (ICU). Although these agents have blood pressure-lowering properties, there are data on the hemodynamic effects of administering them.

OBJECTIVES

Clarify, based on a literary review, how the effects of dexmedetomidine and propofol work using as a basis the extubation time, length of stay in the Intensive Care Unit (ICU), total length of stay and hospital mortality of some patients, through the hemodynamics.

METHOD

A bibliographic survey of articles was carried out between the years 2016 and 2021, using search bases such as PubMed and ScienceDirect, using the descriptors "Sedation", "ICU" and "Dexmedetomidine", 27 articles being selected to complete the present work.

LITERATURE REVIEW

A meta-analysis of three cohort studies revealed that dexmedetomidine is superior to propofol with an average of 4.18 hours (95%) reduction in extubation times, an average of 9.89 hours (95%) reduced hospital stay, ICU and an average reduction of 37.9 hours (95%) in overall hospital stay. Another study revealed patients using propofol compared to dexmedetomidine, among whom developed a negative hemodynamic event at statistically similar frequencies (34.4% vs 16.1%), yet in this study, patients who received propofol developed a greater degree of hypotension. Other evidence denotes 76 patients who combined dexmedetomidine

and propofol. The incidence of hypotension was significantly higher in those who administered dexmedetomidine and propofol concomitantly (62.4%) compared to those who administered dexmedetomidine (23.1%) or propofol (23.9%) alone. Adjunctive dexmedetomidine with propofol has also been associated with higher rates of hypotension. Patients with hypotension were associated with worse clinical outcomes.

CONCLUSION

Therefore, statistically, dexmedetomidine is associated with a shorter extubation time, shorter ICU stay, and shorter hospital stay. The quality of evidence for these findings, however, is low and no recommendations can be made to change current practice. There is insufficient evidence to determine differences in hospital mortality rates. There are significant gaps in the current literature regarding the feat.

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