PENSAR ENFERMAGEM
Revista Científica | Journal of Nursing

Incidence of Delirium in Ventilated Burn Patients: a Cohort Study

Márcia Pereira Silva[1]
orcid.org/0000-0001-7055-8665

Joana Vala[2]
orcid.org/0009-0008-7256-0548

Joana Teixeira[3]
orcid.org/0000-0001-9237-8120

Helga Rafael Henriques[4]
orcid.org/0000-0003-2946-4485

João Sousa[5]

[1]Burn Unit, Unidade Local de Saúde de Santa Maria, Lisbon. Nursing Research, Innovation and Development Centre of Lisbon (CIDNUR), Lisbon, Portugal.

[2] Burn Unit, Unidade Local de Saúde de Santa Maria, Lisbon, Portugal.

[3]Nursing School of Lisbon, Lisbon. Nursing Research, Innovation and Development Centre of Lisbon (CIDNUR), Lisbon, Portugal.

[4]Nursing School of Lisbon, Lisbon. Nursing Research, Innovation and Development Centre of Lisbon (CIDNUR), Lisbon, Portugal.

[5]Urology Department, Unidade Local de Saúde de Santa Maria, Lisbon, Portugal.

Corresponding author:
Márcia Pereira Silva
E-mail: aureliams84@gmail.com

Introduction
Delirium is an independent predictor of mortality, morbidity, increased length of stay and long-term cognitive impairment, with a negative impact on the critically ill patient and their family.[1] There are few studies on critically ill burn patients, and it is estimated that the incidence of delirium in this population can reach 77%.[2,3] This study is part of the cognition.id sub-project, as part of the id.Care project.

Objective
To determine the incidence and risk factors of delirium in burn patients under mechanical ventilation.

Methods
Observational, analytical cohort study between August 2022 and January 2024. The scale Confusion Assessment Method for the Intensive Care Unit was applied at least twice a day. A data collection instrument was created, with variables to characterize the sample, comorbidities and possible risk factors. People who did not require mechanical ventilation, whose cause of admission was not burns or who were not assessed for delirium were excluded. The study was approved by the Ethics Committee.

Results
The mechanism of burn injury in 92.6% of the 27 participants was thermal in origin, with total body surface area (TBSA) between 2%-92% (average 24%). On average, they were ventilated for 14 days, with 21 requiring surgery and 18 developing systemic infections. The incidence of delirium in this study was 81.5%, with an average duration of 11.86 days, and with its development on average on the 12th day of hospitalization. Risk factors for developing delirium are systemic infection, TBSA and surgical intervention.

Conclusion
The incidence of delirium is high in burn patients under mechanical ventilation. Predictors of the development of delirium highlight the importance of considering factors unique to this population to minimize its impact, particularly in the management and control of burn infection.

Keywords
Delirium, Risk Factors, Burns, Comorbidity.

References
1. Dziegielewski C, Skead C, Canturk T, Webber C, Fernando SM, Thompson LH, et al. *Delirium* and Associated Length of Stay and Costs in Critically Ill Patients. Tran QK, editor. Crit Care Res Pract [Internet]. 2021 [cited 2024 May 27]; 1–8. Available from: https://www.hindawi.com/journals/ccrp/2021/6612187/
2. Agarwal V, O'Neill PJ, Cotton BA, Pun BT, Haney S, Thompson J, et al. Prevalence and risk factors for development of *delirium* in burn intensive care unit patients. J Burn Care Res [Internet]. 2010 [cited 2024 May 27]; 31(5):706–15. Available from: https://pubmed.ncbi.nlm.nih.gov/20647937/
3. van Yperen DT, Raats JW, Dokter J, Ziere G, Roukema GR, Van Baar ME, et al. Prevalence and Risk Factors for *Delirium* in Elderly Patients with Severe Burns: A Retrospective Cohort Study. J Burn Care Res [Internet]. 2020 [cited 2024 May 27]; 41(2):371–6. Available from: https://pubmed.ncbi.nlm.nih.gov/31504611/