

Category : **Infections + antimicrobials**

A287 - Comparison of the results of the use of dexamethasone compared with methylprednisolone pulses in severe pneumonia due to covid-19. cohort study

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Introduction:

SARS-CoV-2 infection can cause acute respiratory failure (ARF) associated with COVID-19 with a high mortality rate. The use of systemic steroids showed improvement in mortality, especially in patients requiring invasive mechanical ventilation (IMV)[1]. There are some reports on the use of pulse methylprednisolone (MPS) in COVID-19 with controversial results [2–4]. This study aims to evaluate the effectiveness and safety of patients who received MPS pulses compared with dexamethasone.

Methods:

A retrospective cohort study was performed comparing COVID-19 patients ≥ 18 years with ARF who received MPS compared with dexamethasone from July 2020 to September 2021. The effectiveness outcomes [endotracheal intubation (ETI), ICU- mortality (ICU), in-hospital mortality] and safety outcomes (insulin requirements and infections) were evaluated. An inverse probability weighting-propensity score (IPW-PS) approach was used to control for potential treatment-assigned bias. A robust approach analysis was used to adjust other potential confounders.

Results:

328 patients were included, 100 in the dexamethasone group and 228 in the MPS group. The characteristics were balanced after the IPW-PS (standardized difference of the mean <0.15) (Figure 1A). Patients in the MPS group compared with the patients in the dexamethasone group had higher ETI rates (30% vs 10%, $p=0.001$), higher ICU mortality (32% vs 14%, $p=0.001$), higher in-hospital mortality (35% vs 15%, $p<0.001$), higher insulin requirement ($p=0.01$); and higher number of infections ($p < 0.001$)(Figure 1B).

Conclusion:

The use of MPS is associated with increased ETI rates, mortality, higher insulin requirement, and higher incidence of infections.

References:

1. The RECOVERY Collaborative Group. *New Engl. J of Med.* 2021. pp. 693–704.
2. Jerónimo CMP, et al. *Clin Infect Dis.* 2021 May 4;72(9):e373-e381.
3. Ranjbar K, et al. *BMC Infect Dis.* 2021 Apr 10;21(1):337.
4. Cusacovich I, et al. *Mediators Inflamm.* 2021;2021: 6637227.pp1-10

Image :

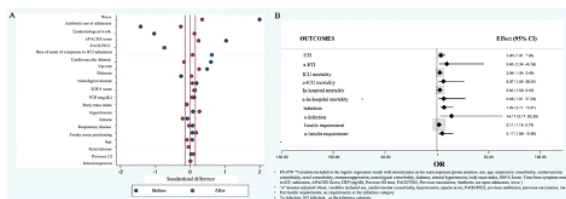


Figure 1- A Standardized differences of the covariates before and after applying the inverse probability weighting propensity score (IPW-PS). B-Odd ratios post-IPW-PS and adjusted for the most relevant clinical outcomes.