

Category : **Respiratory: mechanical ventilation**

A208 - Mechanical power and protective ventilation as mortality determinant in ards associated to covid-19

LA CORTES-PUENTES¹ ; DO Osorio-Perdonmo² ; AV Valencia³ ; VN Nieto² ; MG Gomez²

¹LOSCOBOS MEDICAL CENTER, CRITICAL CARE UNITS, BOGOTA COLOMBIA, Colombia, ²LOSCOBOS MEDICAL CENTER, Bogota colombia, Colombia, ³LOSCOBOS MEDICAL CENTER, Critical CARE UNITS, BOGOTA COLOMBIA, Colombia

Introduction:

The main cause of admission to intensive care of patients with COVID-19 is hypoxemic respiratory failure with a requirement for ventilatory support; the best results have been associated with protective ventilation and the energy disipated over the lung as mechanical power aplicate in the first days of mechanical ventilation. the scope of our paper is find the relation of mortalidad and the ventilation setting

Methods:

Observational analytical retrospective cohort of ARDS patients managment with mechanical ventilation in a critical care unit in bogota colombia. 101 adult patients were admitted to LosCobos intensive care between March 2020 and 2021 with hypoxemic respiratory failure secondary to COVID-19, with indication for mechanical ventilation

Results:

We analiced the first four days of mechanical ventilation. on the first of starting mechanical ventilation, no significant difference was found in the ventilatory parameters of the surviving and non-surviving patients. on the fourth day, the variables under study were quantitatively higher in the group that died: Fio2 $73.93\% \pm 9.3$ vs 42.91 ± 12.3 (MD: 30.71 95% CI - 6.87 - 68.30), tidal volume 434.07 ± 58.982 vs 415.71 ± 43.45 (MD : 18.36 95% CI - 14.63 - 51.35), respiratory rate 27 ± 2.5 vs 14 ± 2.68 (MD: -0.07 95% CI - 1.75 - 1.79), power 31.058 ± 9.28 vs 26.95 ± 7.25 (MD: 4.41 95% CI - 1.35 - 10.18). The trend of power, adjusted power, work and adjusted work is to increase between day 1 to day 4 in the group of those who died: 3.66 ± 7.85 , 0.05 ± 0.12 , 0.13 ± 0.50 and 0.01 ± 0.01 , respectively. Unlike those who did not die, the trend of the variables is to decrease.

Conclusion:

The energy delivered to the respiratory system during mechanical ventilation was associated with mortality in our description, where despite initial protective parameters, ventilatory power and work increased during the first four days of ventilation in the deceased patients