

Category : **Respiratory: mechanical ventilation**

A282 - Mechanical power better determinant of mortality in ARDS patients due to COVID-19 under Mechanical Ventilation

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Introduction:

Protective ventilation parameters have been associated with better outcomes in patients with ARDS, however, ventilator power could be associated with better outcomes. In this study, we analyzed the trend of the ventilatory parameters including the respiratory work and ventilatory power during the first four days of mechanical support in patients with ARDS due to COVID-19

Methods:

Observational analytical retrospective study. We included ARDS patients due to COVID-19 with need of invasive mechanical ventilation support for a least four days, that were admitted in the intensive care units between March 2020 and 2021. We describe the trend of ventilatory parameters in the first four days and evaluate the association of these parameters trends with mortality

Results:

49 patients meeting the inclusion criteria were analyzed, no significant difference was found in the ventilatory parameters of the surviving and non-surviving patients on the first day of mechanical ventilation support, meeting criteria for protective ventilation in both groups. The progression of ventilatory parameters during the first four days evidenced a significant increase in the energy delivered to the respiratory system in the no survivors patients compared with survivors patients, especially in the ventilator inspiratory power (4,82 vs 0,2 j/min) p: 0,04. there is a trend of increase of adjusted ventilator inspiratory power (8 vs 0,2 J/min/kg ideal body weight*10) ventilator work (0,18 vs -0,03 j) and adjusted ventilator work (0,3 vs 0 j/kg ideal body weight*100). no significant difference was found in the trend of driving pressure over the first four days of support

Conclusion:

More than the absolute value in the ventilatory parameters at the beginning of mechanical ventilation support, the trend to increase in the ventilator inspiratory power over the first days of mechanical support, could be better associated with mortality in ARDS patients due to COVID-19