



XL COMU Awards 2021 – Clinical

Timing to intubation COVID-19 patients: can we put it off until tomorrow?

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ABSTRACT: *Background:* The decision to intubate COVID-19 patients receiving non-invasive respiratory support is challenging, requiring a fine balance between early intubation and risks of invasive mechanical ventilation versus the adverse effects of delaying intubation. *Objective:* Analyze the relationship between intubation day and mortality in COVID-19 patients. *Methods:* A unicentric retrospective cohort study considering all adult laboratory-confirmed SARS-CoV-2 infection consecutively admitted at a tertiary hospital between March 2020 and August 2020 requiring invasive mechanical ventilation. The primary outcome was all-cause mortality within 28 days after intubation, and a Cox model was used to evaluate the effect of time from onset of symptoms to intubation in mortality. *Results:* A total of 592 (20%) adult consecutive patients out of 3020 admitted with COVID-19 were intubated during the study period. The median time from admission to intubation was one day (interquartile range, 0-3), and 310 patients (52%) who were intubated and mechanically ventilated deceased 28 days after intubation. Each additional day between the onset of symptoms and intubation was significantly associated with higher in-hospital death (adjusted hazard ratio, 1.018; 95% CI, 1.005-1.03). *Conclusion:* Among patients infected with SARS-CoV-2 who were intubated and mechanically ventilated, delaying intubation in the course of symptoms may be associated with higher mortality.

Keywords: COVID-19; Intratracheal intubation; Mortality; Clinical decision-making.