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Cardiovascular risk and the effects on myocardial events in critical Ill COVID-19 ARDS patients

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Background & Aim: Lipid abnormalities in Covid-19 may be associated with morbidity and mortality.1 Of particular interest would be this assumption in critically ill Covid 19 patients, whether based on the cardiovascular risk situation on admission to an intensive care unit a statement can be made on the rate of cardiac complications or 30-day mortality.

Methods: In a prospective observational study in critically ill Covid-19 patients with acute respiratory distress syndrome (ClinicalTrials.gov NCT04349982), between November 2020 and January 2021, we investigated whether cardiovascular risk calculated using cardiovascular risk scores (Framingham and PROCAM score) can predict the rate of major cardiovascular events (MACE) during ICU stay.

Results: In 31 patients (22 male, 9 female), median age was 68 (IQR 62-74) years and median BMI was 27 (IQR 24-31). Most common pre-existing conditions included arterial hypertension (n=25, 81%), coronary artery disease (n=18, 58%), diabetes mellitus (n=12, 39%), and chronic pulmonary disease (n=6, 19%). Of all patients, 10 (32%) underwent surgical intervention <7 days before ICU admission.

Median length of hospital stay was 7 days before admission to the ICU, median length of ICU stay was 11 (IQR 4-23) days. 30 days after ICU admission, 10 (32%) had died, 8 (26%) patients suffered from any MACE, and 19 (61%) were successfully discharged home after therapy. So far, statistical analyses failed to find any correlation between increased cardiovascular risk calculated by Framingham or PROCAM score and 30-day mortality or major adverse cardiac events or ICU duration (all p>0.05).

Conclusion: In this study, we have not yet found evidence that cardiovascular risk, determined by different risk scores, is predictive of MACE or 30-day mortality in critically ill Covid 19 ARDS patients.

References

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Biography

Specialist in anesthesiology and intensive care medicine at the Clinical Department of Anesthesiology and Intensive Care Medicine at the Medical University of Graz, Austria, since 2016. Active in lipid research since 2017.

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