

Observational Study > Med Intensiva (Engl Ed). Aug-Sep 2021;45(6):325-331.

doi: 10.1016/j.medine.2021.02.006.

Outcomes of renal replacement therapy in the critically ill with COVID-19

E Burke ¹, E Haber ¹, C W Pike ², R Sonti ³

Affiliations

PMID: 34294231 PMCID: [PMC8294005](#) DOI: [10.1016/j.medine.2021.02.006](#)

[Free PMC article](#)

Abstract in English, [Spanish](#)

Objective: To describe outcomes of critically ill patients with COVID-19, particularly the association of renal replacement therapy to mortality.

Design: A single-center prospective observational study was carried out.

Setting: ICU of a tertiary care center.

Patients: Consecutive adults with COVID-19 admitted to the ICU.

Intervention: Renal replacement therapy.

Main variables of interest: Demographic data, medical history, illness severity, type of oxygen therapy, laboratory data and use of renal replacement therapy to generate a logistic regression model describing independent risk factors for mortality.

Results: Of the total of 166 patients, 51% were mechanically ventilated and 26% required renal replacement therapy. The overall hospital mortality rate was 36%, versus 56% for those requiring renal replacement therapy, and 68% for those with both mechanical ventilation and renal replacement therapy. The logistic regression model identified four independent risk factors for mortality: age (adjusted OR 2.8 [95% CI 1.8-4.4] for every 10-year increase), mechanical ventilation (4.2 [1.7-10.6]), need for continuous venovenous hemofiltration (2.3 [1.3-4.0]) and C-reactive protein (1.1 [1.0-1.2] for every 10mg/L increase).

Conclusions: In our cohort, acute kidney injury requiring renal replacement therapy was associated to a high mortality rate similar to that associated to the need for mechanical ventilation, while multiorgan failure necessitating both techniques implied an extremely high mortality risk.

Keywords: ARDS; COVID-19; Reemplazo renal; Renal replacement; SARD.

Copyright © 2021 Elsevier España, S.L.U. and SEMICYUC. All rights reserved.

Related information

[MedGen](#)

LinkOut – more resources

Full Text Sources

[ClinicalKey](#)

[Elsevier Science](#)
[Europe PubMed Central](#)
[PubMed Central](#)

Medical

[MedlinePlus Health Information](#)