
AKI in Critically Ill Patients With COVID-19



Acute kidney injury is highly prevalent among severely ill COVID-19 patients. However, there is very limited data on the progression of AKI and long-term outcomes in these patients.

In this study, researchers aimed to describe the prevalence and risk factors for the development of acute kidney injury, its clinical course and progression and renal recovery or dialysis dependence and survival.

The study was conducted in an intensive care unit in London, UK. Critically ill patients admitted to the ICU between March 2020 and July 2020 with confirmed COVID-19 infection were included in the analysis. Researchers analysed baseline characteristics, organ support, COVID-19 associated therapies and mortality and outcomes at 90 days.

A total of 313 patients were included in the analysis. Of these, 70% were male. 76.7% of patients developed AKI within 14 days of admission to the ICU. 36.1% of patients presented with AKI on ICU admission. Progression to AKI stage 2/3 occurred in 36% of patients. The primary risk factors for AKI progression included mechanical ventilation and positive fluid balance. Steroid therapy was associated with a reduction in the progression of AKI.

Kidney replacement therapy was initiated in 31.9% of patients. Patients with AKI had higher 90-day mortality compared to non-AKI patients. Dialysis dependence was 5% at discharge and 4% at 90 days. Renal recovery was achieved in 81.6 of patients at discharge and 90.9% at 90 days. At the end of three months, 16% of all AKI survivors had chronic kidney disease (CKD). In patients without renal recovery, the incidence of CKD was 44%.

Overall, these findings show that AKI was highly prevalent among patients with severe COVID-19 disease. A third of these patients progressed to severe AKI required kidney replacement therapy. The risk of developing CKD was also high. These findings highlight the importance of identifying factors that could modify AKI progression and to recognise risk factors, and monitoring of renal function post-discharge.

Source: [Annals of Intensive Care](#)

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Published on : Tue, 17 Aug 2021