

Post-Acute-COVID-19-illness renal sequelae

Renal biopsies and autopsies in COVID-19-associated nephropathy (COVAN) patients revealed characteristically collapsing variant of focal segmental glomerulosclerosis, accompanying involution of the glomerular tuft and acute tubular injury in response to the activation of the chemokine and interferon,¹⁻⁴ in addition to renal microcirculation thrombi.⁵ In acute-kidney-injury-susceptible COVID-19 patients, SARS-CoV-2 acts as a second hit that is similar to HIV and other virus.³ In hospitalized-COVID-19 patients and mechanical-ventilation-required-critically-ill-COVID-19 patients, severe acute kidney injury (AKI) requiring renal replacement therapy (RRT) occurs in approximately 5 % and 20 %-31 %, respectively.⁶⁻⁹ Short-term follow-up in several previous early studies in RRT-required patients demonstrated that around 27 %-64 % of them were dialysis independent by 28 days or ICU discharge.^{8,10} At 6 months after acute-COVID-19 phase in the post-acute-COVID-19 Chinese study, around 35 % of patients revealed reduction of the estimated glomerular filtration rate (eGFR; < 90 ml/min per 1.73 m²) and 13 % of them developed new-onset decrease of eGFR after revealed normal eGFR during acute COVID-19 phase.¹¹ Approximately, 84 % of the COVID-19 survivors demonstrated renal recovery and a survival probability of 0.46 at 60 day following the acute COVID-19 phase.⁹ AKI survivor clinics will provide the benefits to COVID-19 survivors with persistent impaired renal function.^{12,13}

In conclusion, COVID-19 survivors with persistent impaired renal function should be early and close followed up in post-acute-COVID-19 AKI clinics.

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