

Visual abstract by Jia H. Ng

COVID-19 and Kidney Health – What to watch out for in 2021



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Acute Kidney Injury in 2021

By Anitha Vijayan

In 2020, acute kidney injury (AKI) came to the forefront during the COVID-19 pandemic as nephrologists struggled to understand the pathophysiology of COVID-19-associated AKI and to provide timely and effective nondialytic and dialytic care to the large volume of patients who overwhelmed healthcare facilities. Recently, personal communications among the members of the ASN COVID-19 Response Team have indicated that the rate of AKI requiring kidney replacement therapy (KRT) in the current wave of the pandemic is lower than that experienced in the spring. The decreasing incidence of severe AKI was also documented in a study of >5000 veterans who were hospitalized with COVID-19 between March and July 2020 (1). The decreased incidence of severe AKI probably reflects changes in patient characteristics and management of the disease. Younger patients, patients with fewer comorbid conditions, early use of dexamethasone and remdesivir, delay in invasive ventilation, and other relevant factors could all have played a role in the decreasing rates of AKI requiring KRT. As the pandemic moves to 2021, we expect the rates of COVID-

19-associated AKI and the need for KRT to remain at the current level.

Biomarkers for the early diagnosis and prognostication of AKI remain a work in progress, and trials are ongoing to establish whether early diagnosis of AKI can lead to changes in management and improve outcomes. Similarly, electronic alerts and algorithms to predict AKI have shown promise (2, 3), and additional studies may help determine whether these measures can be used to prevent AKI in the setting of potential nephrotoxins. The mainstay of treatment of AKI in critically ill patients with sepsis is timely initiation of KRT (4). Amid the pandemic, hemoperfusion and cytokine absorption techniques have received authorization for emergency use from the US Food and Drug Administration. The indications to use these measures are extremely vague, inasmuch as existing data are based on case reports, expert opinions, and anecdotes. Ongoing randomized controlled trials will shed light on whether these therapies will offer meaningful improvement in clinical outcomes.

The appropriate treatment of patients with AKI after discharge is extremely important to reduce readmissions and mortality, and the National Institutes of Health has announced a Request for Application for further research in this area (5). The Caring for OutPatiEnts after Acute Kidney Injury (COPE-AKI) consortium that will be formed as a result will be responsible for developing and testing specific interventions to improve the care of patients with AKI after hospital discharge.

In summary, 2021 will be an exciting year as we await further developments in the field of biomarkers, electronic alerts, and management of AKI. ■

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