



Prevention and Control of COVID-19 in Chronic Kidney Disease

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To the Editor: Since the outbreak of COVID-19 in Wuhan, China, the epidemic caused by COVID-19 has become a public health event of international concern, which is seriously threatening the health of people worldwide. As is known, children with chronic kidney disease (CKD) who are treated with long-term glucocorticoids and immunosuppressants belong to the high-risk and susceptible group of the 2019-nCoV. However, up to date, there is no case report of CKD complicated with COVID-19 in China. We here present our experience in the prevention and control of COVID-19 infection in this special group of patients, with a purpose to provide reference for the international clinical community. The general management comprises of proper rest, adequate nutrition support, and symptomatic treatment. For antiviral therapy, α - interferon, lopinavir / ritonavir, or abidol can be used.

Glucocorticoids in mild and common type COVID-19: For CKD children in the consolidation and maintenance stage of hormone treatment, the frequency of oral hormone use can be changed from every other day to every day for 7 consecutive days at the same dose in order to reduce the recurrence of the primary disease [1]; for those in the stage of hormone-induced remission, the dose of hormone can be tapered according to the patient's condition.

Glucocorticoids in COVID-19 severe and critical type: Hormone dosage should be adjusted according to the degree of systemic inflammatory reaction and whether the patient is complicated with acute respiratory distress syn-

drome (ARDS). It is recommended not to exceed 1–2 mg/kg per day used for methylprednisolone.

Immunosuppressants: Cyclosporine and mycophenolate mofetil were found to significantly inhibit the replication of Middle East respiratory syndrome coronavirus (MERS CoV) and severe acute respiratory syndrome coronavirus (SARS CoV) [2]. However, there is no report about the effect of these immunosuppressants on 2019-nCoV up-to-date. Therefore, the use of immunosuppressants in children with CKD should be determined according to the specific condition of the patient.

Management of blood pressure: The pathogenesis of 2019-nCoV is similar to that of SARS virus [3], which infects human cells by recognizing and binding to angiotensin-converting enzyme (ACE)-2 protein; the use of ACE inhibitors (ACEIs) and angiotensin receptor antagonists (ARBs) can increase the expression and activity of ACE-2 [4]. Therefore, it is suggested that ACEIs and ARBs should be discontinued in children with COVID-19 and other antihypertensive drugs should be used instead.

Compliance with Ethical Standards

Conflict of Interest None.

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