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Impact of COVID-19 on the clinical course of nephrotic syndrome in children: a single-center study

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Objectives: Children with nephrotic syndrome may experience disease relapse or aggravation triggered by various viral infections. Limited studies on the clinical implications of the coronavirus disease 2019 (COVID-19) pandemic in children with nephrotic syndrome have been published worldwide. Therefore, this study aimed to investigate the effects of COVID-19 on the clinical course of nephrotic syndrome in children.

Methods: The medical records of 59 patients with idiopathic nephrotic syndrome who visited our hospital between February and June 2022 were retrospectively analyzed.

Results: Twenty of the total 59 patients with nephrotic syndrome were diagnosed with COVID-19 during the study period. The mean age at the time of the diagnosis of nephrotic syndrome and COVID-19 in all 20 patients was 4.6±3.5 and 8.9±3.9 years, respectively. Three patients (15%) were diagnosed with nephrotic syndrome relapse during COVID-19 and the relapse rate was similar to them without COVID-19 (20.5%, 8/39 patients). At the time of the COVID-19 diagnosis, fever (85%) and cough (40%) were the most common symptoms. After the diagnosis of COVID-19, all patients showed improvement with symptomatic treatment, including antipyretic analgesics and cold medicine. None of the critical patients required hospitalization or oral antiviral medications.

Conclusions: Despite the use of immunosuppressants, the clinical manifestations of COVID-19 in children with nephrotic syndrome were not severe and are expected to be similar to that in the general population. The relapse rate of nephrotic syndrome in children with COVID-19 was also not different from them without COVID-19.