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Results of a study of coronavirus infection surveillance in kidney transplant recipients

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Objectives: By 21 March 2020 infections related to the novel coronavirus SARS-CoV-2 had affected people from 222 countries and caused 3.756.000 reported deaths worldwide. Little is known about risk, presentation and outcomes of SARS-CoV-2 (COVID-19) infection in kidney transplantation recipients, who may be at high-risk due to long-term immunosuppression, comorbidity and residual chronic kidney disease. In late October 2020, an outbreak of COVID-19 became known in Mongolia. Since coronavirus infection is a new pandemic, there are few studies on this disease.

Methods: We surveyed 223 (60.4%) of the 369 outpatients who were regularly monitored in the outpatient clinic. The study included recipients of kidney transplants between February 2008 and November 2020, and statistical analysis was performed using SPSS 19.

Results: The average age of Ktx recipients was 44.9 (18-82), with 157 men (70.4%) and 66 women (29.6%). Of the total Ktx recipients, 12 patients (5.4%) were infected with coronavirus infection and 2 (0.9%) died. 75% of infected patients were LDKT, and remaining 25% were from brain-dead donors. 25% of infected people developed severe disease with complications and remaining 95% had common symptoms of coronavirus infection. Symptoms of COVID-19 included fever, cough, sputum, and respiratory failure. The course of infection was asymptomatic in 16.6%, mild 58.3%, and severe 25%. Of the hospitalized patients 25% were receiving treatment in the intensive care unit 58% in the general ward, and 41% were in need of oxygen supply. Comparing the incidence of dialysis and kidney transplantation 2.22% of 223 Ktx recipients were diagnosed with coronavirus, and 1.8% of 211 dialysis recipients were infected. Among 12 Ktx patients 4 are complicated severely whereas 3 patients condition worsened among hemodialysis patients during treatment.

Conclusions: Most of infected Ktx patients are with normal BMI, usually 50 < age, male, with comorbidity. Complications are relative high on hemodialysis patients.