COVID-19 COMPLICATED BY CMV REACTIVATION IN A RENAL TRANSPLANT PATIENTS. A CASE REPORT

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Background:

Cytomegalovirus (CMV) is a herpesvirus infecting approximately 70-90% of individuals worldwide. It remains latent in immune competent patients and might get reactivated in immunosuppressed patients. It has been noticed that CMV reactivation may occur in up to 38% critically ill coronavirus disease-19 (COVID-19) patients (Agrawal A et al. Eur. Resp. J. 2021 58: OA402). CMV reactivation, as a part of COVID-19, may have significant clinical effects by direct organ damage, additional down-regulation of the immune response and by inducing systemic inflammation that may further aggravate the ongoing inflammatory processes. This resulted in longer hospital stay, prolongation of mechanical ventilation and higher mortality. We present a patient in whom the management of COVID-19 pneumonia was

complicated by CMV reactivation.

Conclusion:

CMV infection significantly complicates COVID-19 and increases the risk of mortality. Timely detection of CMV infection is important in order to initiate proper treatment and improve outcomes.

Case:

A 72-year-old woman was hospitalized on the 2nd day of acute respiratory symptoms caused by COVID-19 pneumonia. The patient has been already diagnosed with diabetes mellitus, hypertension, permanent atrial fibrillation, chronic gastritis. In 2015, a cadaveric kidney transplant was performed due to diabetic nephropathy. Treatment was started with remdesivir, casirivimab / imdevimab and convalescent plasma. Despite treatment, bilateral pneumonia progressed and severe respiratory failure developed. The patient was transferred to the intensive care unit. Due to severe hypoxemia, a high flow of oxygen was applied. CMV-DNA polymerase chain reaction (PCR) was positive (2611 IU/ml). Ganciclovir and CMV-hyperimmune globulin treatment were initiated, along with a modification of the immunosuppressive regimen (discontinuation of mycophenolic acid). Despite the antiviral therapy, progression of CMV infection was recorded. Control CMV-DNA PCR levels of 12905 IU/mL were detected. The dose of CMV-hyperimmune globulin was doubled with continuation of ganciclovir treatment. The recovery was slow and gradual. The patient was discharged home after 2 months of hospital treatment. Complete recovery of respiratory function was achieved, kidney function was normal. Valganciclovir therapy was continued for a total of 6

months, until negative CMV-DNA PCR.