COVID-19 in chronic rejection allograft kidney transplant: a case report

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Background: The world is facing a global pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Kidney transplant recipients at increased risk for COVID-19 infection due to prolonged use of immunosuppressants. Recommendations have been made by different countries for prevention and contingency against COVID-19 in kidney patients, including kidney transplant patients.

Case report: A 60-year-old male was admitted with dyspnea, fever, and cough. The result of thorax rontgen showed broncho-pneumonia, meanwhile his renal ultrasound showed chronic pyelonephritis. Laboratory result was hemoglobin 8.1 g/dL, blood sugar 286 g/dL, D-dimer 800 ng/mL, blood urea nitrogen 123 mg/dL, creatinine 4.8 mg/dL. He has history of diabetic and kidney transplant 14 years ago. He was genetically confirmed as COVID-19 by swab polymerase chain reaction (PCR) testing. The patient was confirmed to the diagnosis of severe case of COVID-19, chronic rejected allograft kidney transplant with comorbid disease of stage II hypertension, diabetes, pneumonia and anemia. During hospitalization, remdesivir therapy 200 mg IV per 12 hours, heparin 5,000 units per 8 hours, meropenem 1 g per 12 hours, and methylprednisolone 20 mg per day was given, while other immunosuppressant were being hold. After 10 days of hospitalization, clinical condition improved and PCR test converted negative then immunosuppressant were being continued, dialysis therapy has not been done because urine output is still good.

Conclusions: Reduction immunosuppression to maintain host defense mechanisms is problematic, especially in patients with immune-mediated kidney disease, disease relapse or transplant rejection. ERA-EDTA DESCARTES expert opinion suggests reducing or stopping AZA/MPA/mTORi (if on triple therapy) for asymptomatic COVID-19 patients and discontinue all immunosuppressive drugs and increase or start steroids for more severe transplant patients with COVID-19.

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