Immunosuppressants

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Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection: 6 case reports

In a short-term, single-center study of 71 patients, analysed from 30 December 2019 to 18 May 2020, 6 patients including 5 men and one woman aged 30s–60s [*exact ages at the reactions onsets not stated*] were described, who developed severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection during immunosuppressive treatment with alemtuzumab, basiliximab, mycophenolate mofetil, prednisolone or tacrolimus [*not all dosages and routes stated*].

All the patients, who had renal disease, underwent renal transplantation. Out of these 6 patients, one patient received induction immunosuppressive treatment with SC alemtuzumab 30mg followed by tacrolimus 0.15 mg/Kg modified release and a reduced dose of per oral mycophenolate mofetil 500mg twice daily, while the remaining 5 patients received induction immunosuppressive treatment with IV basiliximab 20mg (day 0 and day 3) followed by a reducing regimen of prednisolone, tacrolimus 0.15 mg/kg modified release and per oral mycophenolate mofetil 750mg twice daily. After 25–66 days of transplant, the polymerase chain reaction for SARS-CoV-2 were found to be positive in all the patients. The patients presented with the complaints of headache, shortness of breath, diarrhea, cough, fever or myalgia. Out of these 6 patients, one patient was asymptomatic, and one patient exhibited chest pain. The chest X-ray findings were consistent with SARS-CoV-2 infection in three out of these 6 patients. As a result, SARS-CoV-2 infection secondary to the immunosuppressive treatment with alemtuzumab, basiliximab, mycophenolate mofetil, prednisolone and tacrolimus was considered. Out of these 6 patients, 2 patients were likely became infected in the community, while the remaining 4 patients were exposed and infected in the hospital (nosocomial).

Therefore, the mycophenolate mofetil therapy was stopped in 3 patients, and the dose of mycophenolate mofetil was reduced to 250mg twice daily in the remaining 3 patients. However, no patient required critical care admission. Of these 6 patients, 5 patients were subsequently admitted to the hospital, and the length of hospital stay was 2–51 days. These 5 patients remained alive and were subsequently discharged. The remaining one patient was not admitted to the hospital and remained alive. Post-discharge, the estimated glomerular filtration rate (eGFR) was found to be 41–58 mL/min/1.73m^2 for five out of these 6 patients (who were admitted to the hospital), while the remaining one patient (who was not admitted to the hospital) showed eGFR of >90 mL/min/1.73m^2. At the time of the report, all the patients made a full recovery of SARS-CoV-2 infection and have functioning grafts. Of these 6 patients, 4 patients were tested for the presence of circulating SARS-CoV-2 infection specific antibody, and all the 4 patients had sero-converted with a robust IgG response detectable to both nucleocapsid and spike protein.

Georgiades F, et al. Renal transplantation during the SARS-CoV-2 pandemic in the UK: Experience from a large-volume center. Clinical Transplantation 35: No. 1, Jan 2021. Available from: URL: http://doi.org/10.1111/ctr.14150