Immunosuppressants

S

COVID-19 infection: 7 case reports

In a retrospective cohort study, 7 patients (4 men and 3 women) aged 18–80 years-old were described, who developed COVID-19 infection during immunosuppressant treatment with mycophenolic acid, prednisolone, tacrolimus, mycophenolate mofetil, everolimus or sirolimus [*routes not stated; not all outcomes stated*].

The 80-year-old woman, who had arterial hypertension, coronary heart disease, obesity and had been on haemodialysis, had undergone kidney transplantation 7 years prior. She had been receiving immunosuppressant treatment with mycophenolic acid 720 mg/day and prednisolone 2.5 mg/day. She was hospitalised with fever, cough and myalgia. The real-time polymerase chain reaction (RT-PCR) turned positive for COVID-19 infection. She received off-label treatment with azithromycin for COVID-19 infection. She was placed on empiric antimicrobial treatment with piperacillin/tazobactam. She was intubated within 48 hours of admission. Her treatment with mycophenolic acid was discontinued; however, she continued receiving prednisolone. After 16 days of mechanical ventilation, ventilation weaning was initiated. Thereafter, the pulmonary function was improved and she needed mechanical ventilation for less than 12 hours a day.

The 61-year-old man, who had arterial hypertension, coronary heart disease, obesity, insulin-dependent diabetes mellitus, had undergone kidney transplantation 1.5 years prior. He had been receiving immunosuppressant treatment with tacrolimus 3 mg/day, mycophenolic acid 1440 mg/day and prednisolone 2.5 mg/day. He was hospitalised with fever, cough and myalgia. The real-time polymerase chain reaction (RT-PCR) turned positive for COVID-19 infection. He received off-label treatment with azithromycin and hydroxychloroquine. He was placed on empiric antimicrobial treatment with piperacillin/tazobactam. He was intubated within 48 hours of admission. His treatment with tacrolimus and mycophenolic acid were discontinued; however, he continued receiving prednisolone. Ciclosporin [cyclosporine A] was added to his immunosuppressant regimen. After 19 days of mechanical ventilation, ventilation weaning was initiated. Thereafter, the pulmonary function was improved and he needed mechanical ventilation for than 12 hours a day. He had transient graft loss and required haemodialysis.

The 45-year-old man, who had arterial hypertension, had undergone kidney transplantation 5.6 years prior. He had been receiving immunosuppressant treatment with mycophenolate mofetil [Cellcept] 2000 mg/day and prednisolone 10 mg/day. He was hospitalised with fever, cough and myalgia for 4 days. The real-time polymerase chain reaction (RT-PCR) turned positive for COVID-19 infection. He received off-label treatment with azithromycin and hydroxychloroquine. He was placed on empiric antimicrobial treatment with piperacillin/tazobactam. He was initially managed with 4–6L oxygen flow. His treatment with mycophenolate mofetil was discontinued; however, he continued receiving prednisolone. Ciclosporin [cyclosporine A] was added to his immunosuppressant regimen. However, he showed a delayed progression and required intubation 10 days after admission. After 3 days of mechanical ventilation, he was extubated. Seventeen days after admission, he was discharged in a good health.

The 65-year-old woman, who had arterial hypertension, had undergone liver transplantation 5.6 years prior. She had been receiving immunosuppressant treatment with everolimus 4 mg/day and mycophenolate mofetil [Cellcept] 500 mg/day. She was hospitalised with fever, cough and myalgia. The real-time polymerase chain reaction (RT-PCR) turned positive for COVID-19 infection. She was placed on empiric antimicrobial treatment with piperacillin/tazobactam. Her treatment with mycophenolate mofetil was discontinued while she continued receiving everolimus. She was managed on a regular ward. She was discharged after 14 days of hospitalisation.

The 18-year-old man, who had arterial hypertension and had been on haemodialysis, had undergone liver transplantation 15 years prior. He had been receiving immunosuppressant treatment with mycophenolate mofetil [Cellcept] 1000 mg/day. He was hospitalised and the real-time polymerase chain reaction (RT-PCR) turned positive for COVID-19 infection. He was placed on empiric antimicrobial treatment with piperacillin/tazobactam. He continued receiving mycophenolate mofetil. He was managed on a regular ward. He was discharged after 18 days of hospitalisation.

The 65-year-old man, who had arterial hyptertension, coronary heart disease and had been on haemodialysis, had undergone lung transplantation 7.9 years prior. He had been receiving immunosuppressant treatment with tacrolimus 2.5 mg/day, mycophenolate mofetil [Cellcept] 1000 mg/day and prednisolone 10 mg/day. He was hospitalised with fever, cough and myalgia. The real-time polymerase chain reaction (RT-PCR) turned positive for COVID-19 infection. He received off-label treatment with azithromycin and hydroxychloroquine. He was placed on empiric antimicrobial treatment with piperacillin/tazobactam. His treatment with mycophenolate mofetil was discontinued; however, he continued receiving tacrolimus and prednisolone. He was initially managed with 4–6L oxygen flow. However, he showed a delayed progression and required intubation 15 days after admission. He was on mechanical ventilation for 24 days.

The 48-year-old woman, who had arterial hypertension and insulin-dependent diabetes mellitus, had undergone heart transplantation 5 years prior. She had been receiving immunosuppressant treatment with tacrolimus 4 mg/day and sirolimus 1 mg/day. She was hospitalised to an external clinic because of cholangitis [*aetiology not stated*] and then transferred to another hospital where real-time polymerase chain reaction (RT-PCR) turned positive for COVID-19 infection. She was managed on a regular ward. She was placed on empiric antimicrobial treatment with piperacillin/tazobactam. She was treated with cefuroxime and metronidazole for cholangitis. She was discharged after 12 days of hospitalisation.

Bosch F, et al. Attenuated early inflammatory response in solid organ recipients with COVID-19. Clinical Transplantation 34: No. 10, Oct 2020. Available from: URL: http://doi.org/10.1111/ctr.14027