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Specific organization for in-hospital belatacept infusion to avoid nosocomial transmission during the SARS-CoV-2 pandemic

To the Editor:

The first cases of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) occurred in France in early February and in our region (southwest France) in early March 2020.

The stay-at-home order became effective in France on March 17. Immunocompromised patients were asked to stay confined and outpatient clinic visits were dramatically reduced. As suggested in a very recent publication,[1] because belatacept requires a monthly in-center administration, several physicians had questioned pursuing treatment in transplant patients and suggested replacing it with an oral immunosuppressive regimen to reduce the risk of nosocomial infection. However, changing the main immunosuppressant during a pandemic is challenging because this requires frequent laboratory testing and the clinical and biological consequences are unpredictable.

At Toulouse University Hospital, we organized a specific infection control protocol for the 113 organ transplant patients receiving maintenance belatacept therapy (102 kidney transplant patients and 11 heart transplant patients). All patients were screened by telephone for respiratory and/or gastrointestinal symptoms the day before the scheduled infusion. Patients who had a fever, respiratory symptoms, gastrointestinal disorders, or who had been in contact with a SARS-CoV-2-positive person were directed to a unit dedicated to suspected cases of coronavirus disease 2019 (COVID-19). A different isolated section in the outpatient unit was dedicated to patients without symptoms of COVID-19 (8 AM-6 PM, 5 days per week). On admission, patients were interviewed to detect respiratory symptoms, each patient received a mask, gloves were removed, and patients were asked to take hand hygiene measures using an alcohol-based hand cleanser. Each patient was admitted to an isolated room. All health workers wore masks.

On May 9, nucleic acid tests were SARS-CoV-2 positive for 7398 patients in our region. We admitted 460 patients. Twenty-three transplant patients were hospitalized for confirmed COVID-19. Among belatacept-treated patients, only 1 case of suspected COVID-19 was identified in a kidney transplant patient during telephone screening. He had a fever and respiratory symptoms. He was admitted to the unit dedicated to patients with suspected COVID-19. An oropharyngeal swab specimen was obtained, which detected SARS-Cov-2. Chest computed tomography showed multiple patchy ground-glass opacities. He was hospitalized, belatacept was discontinued, and no cytokine storm was noted. He was discharged 1 month later. Recently, Marx et al reported a rapid recovery in the first case of COVID-19 in a patient on belatacept. This patient also presented no cytokine release. They hypothesized that the mild clinical course of COVID-19 observed in their patient may have been, at least partially, because of a belatacept-related blockade of massive cytokine/chemokine production.[2]

Since the stay-at-home order, the 112 remaining patients have received their belatacept infusions monthly (3 times each). No symptom that required SARS-CoV-2 testing was detected. No nosocomial transmission occurred in our patients treated with belatacept. Therefore, instead of a potentially risky change in immunosuppressive regimen, we suggest organizing a dedicated infection control protocol with stringent barrier precautions for patients requiring regular outpatient infusion during the COVID-19 pandemic.

KEYWORDS

clinical research/practice, complication: infectious, immunosuppressant—fusion proteins and monoclonal antibodies: belatacept, immunosuppression/immune modulation, infectious disease

DISCLOSURE

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