Incidence of SARS-CoV-2 Infection in Asthma Patients on Omalizumab Therapy

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Dear Editor,

We read the article, "COVID-19: Infection Control and Treatment Strategy in Pediatric Age Group in Turkey," by Tezer et al. (1) with great interest. We would like to share and discuss our clinical observations on the incidence and effects of coronavirus 2019 (COVID-19) in asthma patients treated with omalizumab.

In our clinic, there were 10 patients with a previous diagnosis of asthma who had been using omalizumab. The mean age of the group was 16.5 years; 6 (60%) were male and 4 (40%) were female. Only a 20-year-old female patient with the diagnosis of moderate-severe asthma who used omalizumab was found to have a positive polymerase chain reaction test result for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The patient had only mild symptoms of COVID-19 and was able to manage the infection at home without medication.

Only 1 of the 10 (10%) patients who used omalizumab developed a COVID-19 infection, which was mild and did not require hospitalization. Omalizumab use does not appear to cause comorbidity in the course of COVID-19. We continued omalizumab treatment without any ill effect. Our experience is consistent with the literature indicating that patients receiving omalizumab treatment for asthma are at no greater risk of contracting a SARS-CoV-2 infection than the common population and provide further support for the safety of omalizumab use during the COVID-19 pandemic (2).

The course of COVID-19 in our case seemed to be no different than of the general population. New data related to omalizumab use and COVID-19 continue to be reported every day; however, it does not appear to represent additional risk (3). Nonetheless, we must be cautious in severe cases of COVID-19, as advised (4).

We look forward to additional data on how this biologic, omalizumab, impacts transmission of viral infections such as SARS-CoV-2. Gill et al. (5) reported reduced dendritic cell interferon expression in response to influenza virus that was inversely correlated with the serum level of immunoglobulin E in asthma patients. The authors suggested that this may contribute to a strong antiviral immune reaction and improved type I interferon responses that could prevent viral replication and limit the spread of infection.

In conclusion, the incidence of SARS-CoV-2 infection in asthma patients using omalizumab therapy was no higher in our clinic than that of the general population, and omalizumab as a treatment strategy in the course of COVID-19 appears to be effective and without significant consequence.

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