PRESS RELEASE

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RISK OF SARS-COV-2 INFECTION DURING THE OMICRON SURGE IN PATIENTS ON DIALYSIS: THE ROLE OF ANTIBODY RESPONSES AND VACCINE DOSES

Highlight

- Among US adults with kidney failure receiving dialysis, risk for SARS-CoV-2 infection during the Omicron-dominant period was higher among patients without vaccination and with 1–2 doses compared with 3 doses of mRNA vaccines.
- Irrespective of vaccine doses, risk for infection was higher among patients with low circulating levels of anti–SARS-CoV-2 antibodies.

Washington, DC (August 15, 2022) — In a recent study published in *JASN*, a third COVID-19 mRNA vaccine dose in adults with kidney failure who were on dialysis enhanced patients' protection against SARS-CoV-2 infection during the Omicron-dominant period. A patient's response to vaccination or prior infection—as measured by circulating anti-SARS-CoV-2 antibody levels—was also an important predictor for subsequent risk of infection.

In the study of randomly-selected patients receiving dialysis in the United States, a team led by Shuchi Anand, MD, MS, Pablo Garcia, MD, MS, and Maria Montez Rath, PhD (Stanford University School of Medicine) followed patients' monthly anti–SARS-CoV-2 antibody levels and ascertained COVID-19 infection during the Omicron- dominant period of December 25, 2021 to January 31, 2022 using electronic health records.

Among 3,576 patients receiving dialysis, 901 (25%) received a third mRNA vaccine dose as of December 1, 2022, and early antibody responses to third doses were robust. During the Omicron-dominant period, SARS-CoV-2 infection was documented in 340 (7%) patients. Risk for infection was doubled among patients without vaccination and nearly 1.5-fold higher with 1–2 doses compared with 3 doses. Irrespective of vaccine doses, risk for infection was at least 2-fold higher among patients with low circulating levels of anti–SARS-CoV-2 antibodies.

"The COVID-19 pandemic continues to evolve, and it is clear that COVID-19 will become an endemic infection—that is, an infection that circulates at regular intervals in our community. In such a situation, it is critical to devise strategies that protect the most medically vulnerable persons with appropriate vaccine doses or additional preventive measures (such as monoclonal antibodies), and early treatments," said Dr. Anand. "Measuring a person's circulating antibody response to SARS-CoV-2 virus may help us

identify the highest risk persons eligible for enhanced protection among patients on dialysis, and other immunocompromised or frail populations."

Additional co-authors include Jialin Han, LinaCel Cadden, Patti Hunsader, Curt Morgan, Russell Kerschmann, Paul Beyer, Mary Dittrich, Julie Parsonnet, Glenn Chertow, amd Geoffrey Block.

Disclosures: LC, PH, CM, RK and PB are employed by Ascend Clinical Laboratories. MD and GB are employed by U.S. Renal Care. GC is on the Board of Satellite Healthcare, a not for profit dialysis organization.

The article, titled "SARS-CoV-2 infection during the Omicron surge among patients receiving dialysis: the role of circulating receptor-binding domain antibodies and vaccine doses," will appear online at http://jasn.asnjournals.org/ on August 15, 2022; doi: 10.1681/asn.2022040504.

About ASN

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