



PRESS RELEASE

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DETAILS BEHIND KIDNEY TRANSPLANT RECIPIENTS' IMMUNE RESPONSE TO THE VIRUS THAT CAUSES COVID-19

Recipients mount a slower IgG antibody response following infection.

Highlights

- A recent study examined the spectrum of antibody responses—including IgG, IgM, and IgA antibodies—in kidney transplant recipients infected with the virus that causes COVID-19.
- The antibody response to infection is delayed but preserved in kidney transplant recipients.

Washington, DC (October 1, 2021) — New research provides insights on the immune responses of kidney transplant recipients following infection with the virus that causes COVID-19. The study, which is published in *JASN*, may help explain why these individuals face a higher risk of dying from COVID-19 than others in the general population.

Recent reports have generated conflicting results concerning whether kidney transplant recipients, who must take immunosuppressive medications to prevent rejection of their transplant, mount strong immune responses against SARS-CoV-2 after becoming infected with the virus or receiving COVID-19 vaccines.

Now a team led by Jonathan Maltzman, MD, PhD (Stanford University School of Medicine) has examined the dynamics of the immune response of these individuals after natural infection with SARS-CoV-2. Such an immune response involves different antibody types, including IgG, IgM, and IgA.

This multicenter study involving investigators from Mount Sinai, Montefiore, Emory, and Cincinnati, in addition to Stanford, included 49 kidney transplant recipients with SARS-CoV-2 infection. Production of IgG antibodies against SARS-CoV-2 was delayed, but IgM and IgA responses were similar to those observed in individuals who had not received a transplant.

The findings indicate that the antibody response to SARS-CoV-2 infection is delayed but preserved in kidney transplant recipients. “Almost all kidney transplant recipients infected with the virus that causes COVID-19 generate immune responses,” said Dr. Maltzman. “But some aspects of the response are patients with kidney transplants have a slower immune response to infection and make slightly different types of antibodies.”

The findings likely extend to other people on chronic immunosuppression and may be useful for devising strategies to boost these individuals’ immune responses following vaccination.

Study co-authors include Paolo Cravedi, MD-PhD, Patrick Ahearn, MD, Lin Wang, PhD, Tanuja Yalamarti, MD, Susan Hartzell, BS, Yorg Azzi, MD, Madhav C. Menon, MD, Aditya Jain, MD, Marzuq Billah, MD, Marcelo Fernandez-Vina, PhD, Howard M Gebel, PhD, E. Steve Woodle, MD, Natalie S. Haddad, Andrea Morrison-Porter, F. Eun-Hyung Lee, MD, Ignacio Sanz, MD, Enver Akalin, MD, and Alin Girnita, MD, PhD.

Disclosures: JSM has received honoraria from One Lambda, Inc., is a member of the Qihan Biotech SAB, and has a family member who is employed by and has an equity interest in Genentech/Roche. FEL is the founder of Micro-plex, Inc and receives grants from BMGF and Genentech.

The article, titled “Delayed kinetics of IgG, but not IgA anti-Spike antibodies in transplant recipients following SARS-CoV-2 infection,” will appear online at <http://jasn.asnjournals.org/> on October 1, 2021.

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