



PRESS RELEASE

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IMMUNE RESPONSES AFTER COVID-19 VACCINATION IN KIDNEY TRANSPLANT RECIPIENTS AND PATIENTS ON DIALYSIS

Study reveals low antibody responses in kidney transplant recipients.

Highlights

- A large majority of patients with kidney failure on dialysis—but not kidney transplant recipients—developed antibody responses to SARS-CoV-2 after COVID-19 vaccination.
- Vaccination also led to strong T cell responses against the virus that causes COVID-19 in all patients on dialysis, and in nearly 58% of kidney transplant recipients.

Washington, DC (June 9, 2021) — A new study reveals the extent to which kidney transplant recipients and individuals with kidney failure who are on dialysis mount immune responses—which include the production of antibodies and the activation of T cells—to COVID-19 vaccination. The findings are published in *JASN*.

Data are scarce on whether kidney transplant recipients and individuals on dialysis receive sufficient protection from COVID-19 vaccines. To investigate, Dominique Bertrand, MD (Rouen University Hospital, in France) and his colleagues examined immune responses after vaccination with the Pfizer-BioNTech COVID-19 mRNA vaccine in 45 kidney transplants recipients and 10 patients undergoing chronic hemodialysis.

After the second vaccine dose, 88.9% of patient on dialysis and only 17.8% of kidney transplant recipients developed antibodies against the virus that causes COVID-19. A specific T-cell response against the virus was evident in 100 % of patients on dialysis and 57.8% of kidney transplant recipients. The immune response seemed to be influenced by the immunosuppressive drugs that kidney transplant recipients took, with some drugs having a greater effect than others.

“The vaccine seems efficient in individuals undergoing dialysis, indicating that vaccination should be highly recommended in these patients,” said Dr. Bertrand. “By contrast, the low antibody response observed in kidney transplant recipients is worrying; however, antibodies are not the full spectrum of protection induced by the vaccine. T cell immunity is probably also very important.”

The findings may be useful for developing an effective strategy of vaccination for kidney transplant recipients.

Study co-authors include Mouad Hamzaoui, MD, PhD, Veronique Lemée, MD, Julie Lamulle, Mélanie Hanoy, MD, Charlotte Laurent, MD, Lebourg Ludivine, MD, Isabelle Etienne, MD, Mathilde Lemoine, MD, Dorian Nezam, MD, Jean-Christophe Plantier, MD, PhD, Olivier Boyer, MD, PhD, Dominique Guerrot, MD, PhD, and Sophie Candon, MD, PhD.

Disclosures: The authors reported no financial disclosures.

The article, titled “Antibody and T Cell response to SARS-CoV-2 Messenger RNA BNT162b2 Vaccine in Kidney Transplant Recipients and Hemodialysis Patients,” will appear online at <http://jasn.asnjournals.org/> on June 9, 2021, doi: 10.1681/ASN.2021040480.

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