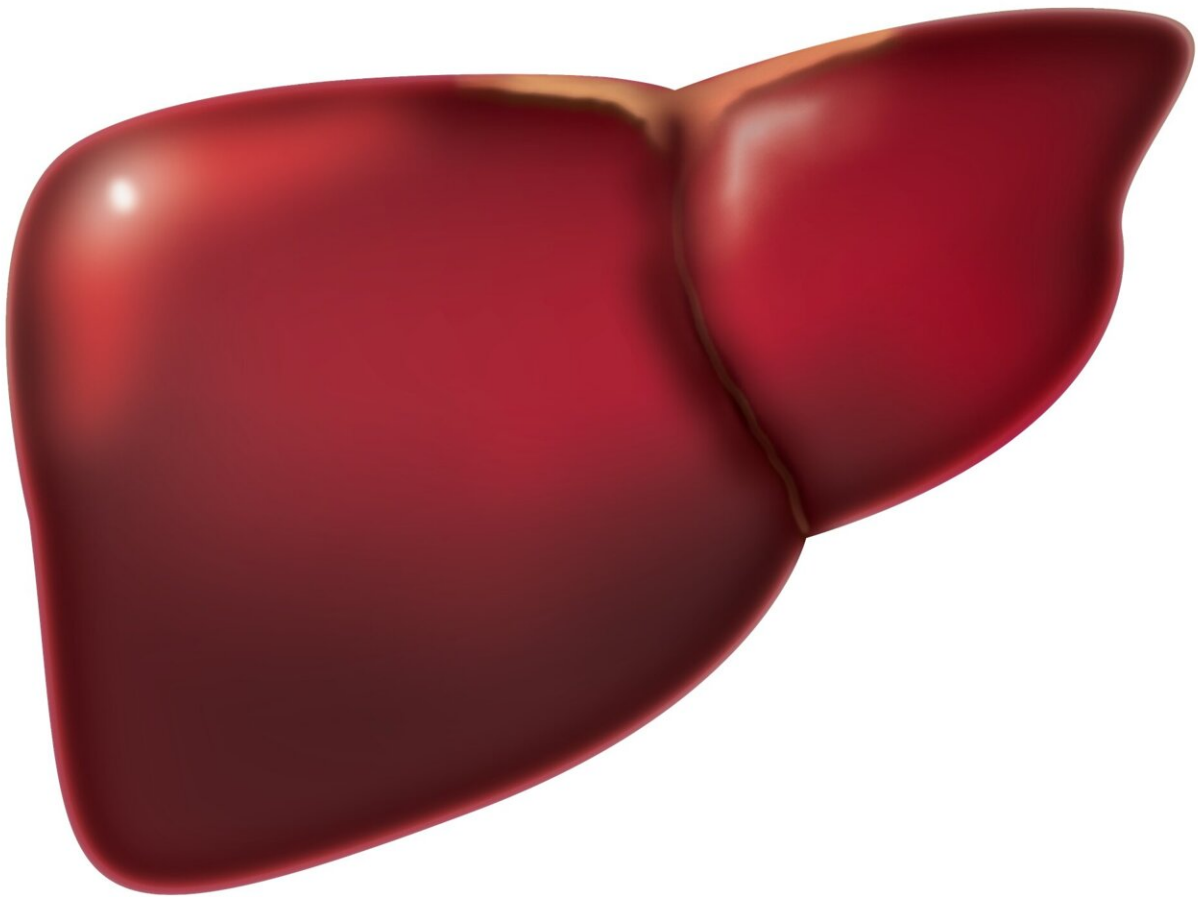


Treatment plan reduces hospitalizations and deaths of liver and kidney transplant recipients with COVID-19

October 14 2021



Credit: Pixabay/CC0 Public Domain

Liver and kidney transplant recipients have a higher risk of severe COVID-19 and/or death should they become infected because the medication they take to ensure a successful transplant suppresses their immune systems.

Keck Hospital of USC performs some 300 [liver](#) and [kidney](#) transplants each year, and provides ongoing care to thousands of post-transplant patients on an outpatient basis. During the peak of the COVID-19 surge in Los Angeles, Keck Medicine of USC physicians implemented a new protocol to monitor and manage the care of liver and kidney transplant recipients who developed COVID-19, including monoclonal antibody therapy for eligible patients.

Now, a new study shows that as a result of these efforts, the number of hospitalizations and deaths for patients managed with the new protocol dropped by 18%. For those who received the drug therapy, the number of hospitalizations were halved, and deaths reduced to zero.

"We took a very proactive approach in managing our at-risk patients that resulted in significantly improved outcomes," said Aaron Ahearn, MD, Ph.D., a liver, kidney and pancreas transplant surgeon with Keck Medicine, who also is the principal investigator and corresponding author of the study.

Quick response to an urgent problem

Early in the pandemic, Keck Medicine physicians realized that

COVID-19 was much more lethal for transplant recipients than the general population. By December 2020, the height of the Los Angeles outbreak, they were treating 20 or more COVID-positive liver or kidney transplant recipients per week, many of them gravely ill.

"We were overwhelmed with cases and realized we needed to do something quickly to help these patients," said Ahearn.

Ahearn and his colleagues assembled a multidisciplinary team consisting of transplant, infectious disease, nephrology, hepatology and family [medicine](#) specialists to devise a new patient protocol that included:

- Creating a database to track COVID-19 outcomes.
- Educating staff on identifying and monitoring COVID-19 symptoms.
- Creating a triage system to determine the severity of the disease and appropriate level of care.
- Providing telehealth visits by internal and family medicine doctors.
- Giving all recent transplant recipients a home pulse oximetry monitor to track their oxygen levels.

Additionally, eligible patients who tested positive for COVID-19 were offered monoclonal antibody therapy, which the U.S. Food and Drug Administration had approved in November 2020 for emergency use to treat COVID-19. Monoclonal antibodies have been found to be effective for treating mild to moderate COVID-19 disease soon after infection.

Patients who tested positive for COVID-19 within the previous 10 days with symptoms not severe enough to be hospitalized were eligible for the drug therapy. All patients who met this criterion were offered a single outpatient infusion of one of two monoclonal antibody therapies.

How the study was conducted

For the study, the physicians conducted a retrospective review of all liver and kidney transplant recipients who tested positive for COVID-19 and were seen at Keck Hospital from Feb. 1, 2020 to Feb. 28, 2021, a total of 226 patients. They reviewed patient demographics, COVID-19 treatments, hospitalizations and survival rates.

When comparing the outcomes of all patients before and after the protocol was implemented, the study authors found the total rate of hospitalization dropped from 54% to 35% and deaths from 20% to 9%.

They also discovered that the protocol was even more effective for patients who were identified early in their disease course and were therefore eligible for monoclonal antibody therapy.

A total of 34 (17 liver or combined liver/kidney transplant recipients and 17 kidney transplant recipients) received the drug therapy. For this group, COVID-related hospitalizations fell from 32% to 15% and death from 13% to zero.

Additionally, none of the patients had a major adverse reaction to the therapies.

Ahearn believes these results have important implications for the continued treatment of liver and kidney transplant recipients in the age of COVID-19.

"While all patients benefitted from our change in protocol, those who received the monoclonal antibodies benefitted the most," he said. "Our study strongly suggests that these therapies can reduce disease progression in liver and kidney [transplant](#) recipients with COVID-19 and should be considered for all patients."

More information: Aaron J Ahearn et al, A Programmatic Response, Including Bamlanivimab or Casirivimab-Imdevimab Administration, Reduces Hospitalization and Death in COVID-19 Positive Abdominal Transplant Recipients, *Transplantation* (2021). [DOI: 10.1097/TP.0000000000003953](https://doi.org/10.1097/TP.0000000000003953)

Provided by University of Southern California

Citation: Treatment plan reduces hospitalizations and deaths of liver and kidney transplant recipients with COVID-19 (2021, October 14) retrieved 5 May 2024 from <https://medicalxpress.com/news/2021-10-treatment-hospitalizations-deaths-liver-kidney.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.