

LETTER TO THE EDITOR

Response to “Is the outcome of SARS-CoV-2 infection in solid organ transplant recipients really similar to that of the general population?”

To the Editor,

We read with great interest the letter titled “Is the outcome of SARS-CoV-2 infection in solid organ transplant recipients really similar to that of the general population?” by Mendoza et al.¹ regarding our recently published paper.² We agree with the authors that based on current data we can only speculate that once admitted to the hospital or intensive care unit (ICU), clinical outcomes of solid organ transplant (SOT) recipients and non-SOT recipients are comparable,^{2,3} but it is still unclear whether SOT recipients have similar outcomes to COVID-19-infected patients in the outpatient setting. However, we would like to emphasize that we never concluded that “transplant status is not associated with higher mortality or other related outcomes” as stated in this letter.¹ Our study indicated that death and organ support requirement were similar between critically ill SOT and non-SOT patients with COVID-19.²

Data indicate that the rate of transplantation has declined considerably in both Europe and the United States during the pandemic,⁴ perhaps due to concern regarding early reports of high mortality rates in SOT patients with COVID-19.⁵⁻⁹ However, these initial reports included only SOT patients without properly matched control groups,⁵⁻⁹ which makes it impossible to determine the risk attributable to transplantation status or associated risk factors. Furthermore, results from European registries indicated that kidney transplant recipients with COVID-19 had a 28% higher risk of 28-day mortality compared to dialysis patients with COVID-19.¹⁰ Notwithstanding the advantage of using dialysis patients as comparators, the aforementioned study failed to match patients on several important confounders, such as comorbidities or dialysis vintage.¹⁰ These studies suggested that factors associated with transplantation status were the cause of these worse outcomes.

Our results cast doubt on these conclusions, and suggest that the results of earlier studies may have been biased by unmeasured confounders. Kidney transplant recipients have in fact similar risk of in-hospital or ICU-death as nontransplanted patients with similar clinical characteristics. While we agree that further studies are needed to determine the relative risk of death and other clinically relevant endpoints according to SOT status in noncritically ill patients, we believe that our findings question withholding or delaying the processes leading to transplantation, such as waitlisting, for fear

of worsening outcomes. In fact, a recent study showed that wait-listed patients were more likely to require hospitalization (82% vs 65%, $p = .03$) and had a higher risk of mortality (34% vs 16%, $p = .02$) than kidney transplant recipients.¹¹

Our study, along with others, sheds light on whether transplanted patients have similar in-hospital and ICU-related outcomes as clinically similar patients from the general population. We agree with the authors of the letter that additional data and studies with well-matched control groups are needed to determine if outcomes are indeed similar across other clinical settings.

KEYWORDS

clinical research/practice, complication: infectious, health services and outcomes research, infection and infectious agents – viral, kidney transplantation/nephrology

DISCLOSURE

The authors of this manuscript have no conflicts of interest to disclose as described by the *American Journal of Transplantation*.

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