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CASE ANECDOTES, COMMENTS AND OPINIONS

Comment on “Epidemiological and clinical characteristics of heart transplant recipients during the 2019 coronavirus outbreak in Wuhan, China” by Ren et al

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The study by Ren et al¹ suggests that heart transplant recipients (HTR) do not have a substantially higher rate of coronavirus disease 2019 infection than the general population. This finding is not surprising because immunosuppressive treatment used in HTR favors specific viral infections such as cytomegalovirus or herpes simplex virus infections much more than community-acquired respiratory viruses. For instance, there were only 3 lung infections owing to influenza among 1,073 infectious episodes that occurred in 620 consecutive patients with heart transplantation at Stanford Medical Center between December 1980 and June 1996.² In our cohort, since 1985, only 1 of 243 HTR who survived more than 90 days after transplantation required invasive mechanical ventilation for a community-acquired respiratory virus. This patient was classified as obese, with diabetes, and had graft failure. Moreover, to the best of our

knowledge, there were no reported cases of severe coronavirus infections in HTR before the current pandemic.

What we do know is that several of the proposed drugs for coronavirus disease 2019 infection have significant interactions with calcineurin blockers. Azithromycin and hydroxychloroquine are CYP3A4 inhibitors and significantly increase cyclosporine concentrations.³ Lopinavir–ritonavir association is a strong CYP3A4 inhibitor that can increase both tacrolimus and cyclosporine concentrations.⁴ Watchful monitoring of calcineurin blocker levels is, thus, necessary if these drugs are used.

References

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