

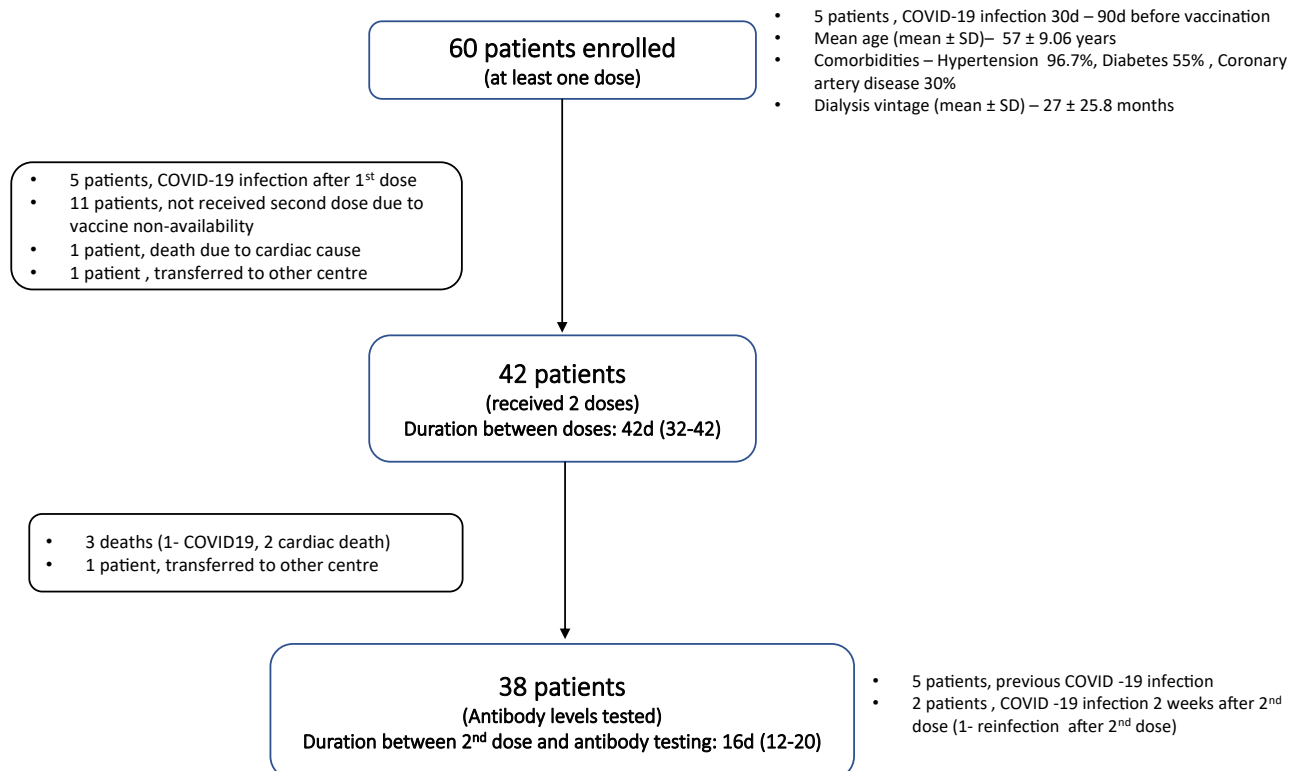
# Neutralizing SARS-CoV-2 Antibody Response and Protective Effect of 2 Doses of ChAdOx1 nCoV-19 and BBV152 Vaccines in Hemodialysis Patients: A Preliminary Report



**To the Editor** Two vaccines, ChAdOx1 nCoV-19 (Astra Zeneca, Cambridge, UK) and BBV152 (COVAXIN; Bharat Biotech, Hyderabad, Telangana, India), are currently approved in India. Recent studies show seroconversion rates between 35% and 80% after a single dose of mRNA vaccines and ChAdOx1 nCoV-19 and low titers compared with controls in dialysis patients after 2 doses of mRNA vaccines.<sup>1,2</sup> Seroconversion rates after 2 doses of ChAdOx1 nCoV-19 and BBV152 are not yet reported in hemodialysis patients.

We enrolled patients (>45 years) receiving hemodialysis in our center. The IgG antispikes protein (Elecsys Anti-SARS-CoV-2 S; Roche Diagnostics, Basel, Switzerland) was measured at least 2 weeks after the second dose of vaccines. Sixty patients received at least 1 dose, and 42 patients received 2 doses of vaccine (4 weeks apart for BBV152 and at least 6 weeks apart for ChAdOx1 nCoV-19). Antibody samples were analyzed for 38 patients (26 patients for ChAdOx1 nCoV-19 and 12 patients for BBV152) at least 2 weeks after the second dose (Figure 1). The IgG antispikes protein was positive ( $\geq 0.8$  U/mL) in 35 of 38 patients (92.1%), and the majority (26/35, 74.3%) had high titers (>250 U/mL).

Five patients (5/60) developed COVID-19 infection after the first dose of the vaccine; all required hospitalization with no mortality. Two patients (2/42) contracted COVID-19 at least 2 weeks after the second dose; both required hospitalization, and 1 patient died. Thus, a single dose of vaccine provided 91.7% protection from infection/hospitalization, whereas 2 doses of the vaccines provided 95.2% and 97.6% protection from infection/hospitalization and death, respectively. Our preliminary study shows 2 doses of ChAdOx1-nCoV-19 and BBV152 provide excellent protection from COVID-19 in hemodialysis patients. These findings should be confirmed with large studies.



**Figure 1.** COVID-19 vaccination and neutralising SARS-CoV-2 antibody testing in patients on hemodialysis.

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