

Neutralization of B.1.1.28 P2 variant with sera of natural SARS-CoV-2 infection and recipients of inactivated COVID-19 vaccine Covaxin

Journal:	<i>Journal of Travel Medicine</i>
Manuscript ID	JTM-21-272.R1
Manuscript type:	Rapid Communication
Date Submitted by the Author:	n/a
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Keywords:	B.1.1.28.2, Neutralization, SARS-COV-2, vaccine, Covaxin

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Text

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In this study, we determined the IgG immune response and neutralizing activity of the 19 convalescent sera specimens obtained from the recovered cases of COVID-19 and confirmed for B.1.1.7 (UK) (n=2), B.1.351 (South Africa) (n=2), B.1.1.28.2 (n=2), B1 lineage (n=13) (15-113 days post positive test). The data were compared with 42 participants immunized with an inactivated Covid-19 vaccine, Covaxin (BBV152) as part of phase II clinical trial (two months post the second dose).⁸ Neutralizing antibody (NAb) titers of all the serum specimens were evaluated against B.1.1.28.2 variant using plaque reduction neutralization test (PRNT50).⁵ Neutralization activity of B.1.1.28.2 was compared to prototype D614G variant as Covaxin vaccine has been developed using D614G variant.

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The study is approved by the Institutional Biosafety Committee and Institutional Human Ethics Committee of ICMR-NIV, Pune, India

Author Contributions

PDY, RE and PA contributed to study design, data collection, data analysis, interpretation and writing and critical review. GS and DYP contributed to data collection, interpretation, writing and critical review. NG, SP, VKM and BB contributed to critical review and finalization of the paper.

Conflicts of Interest

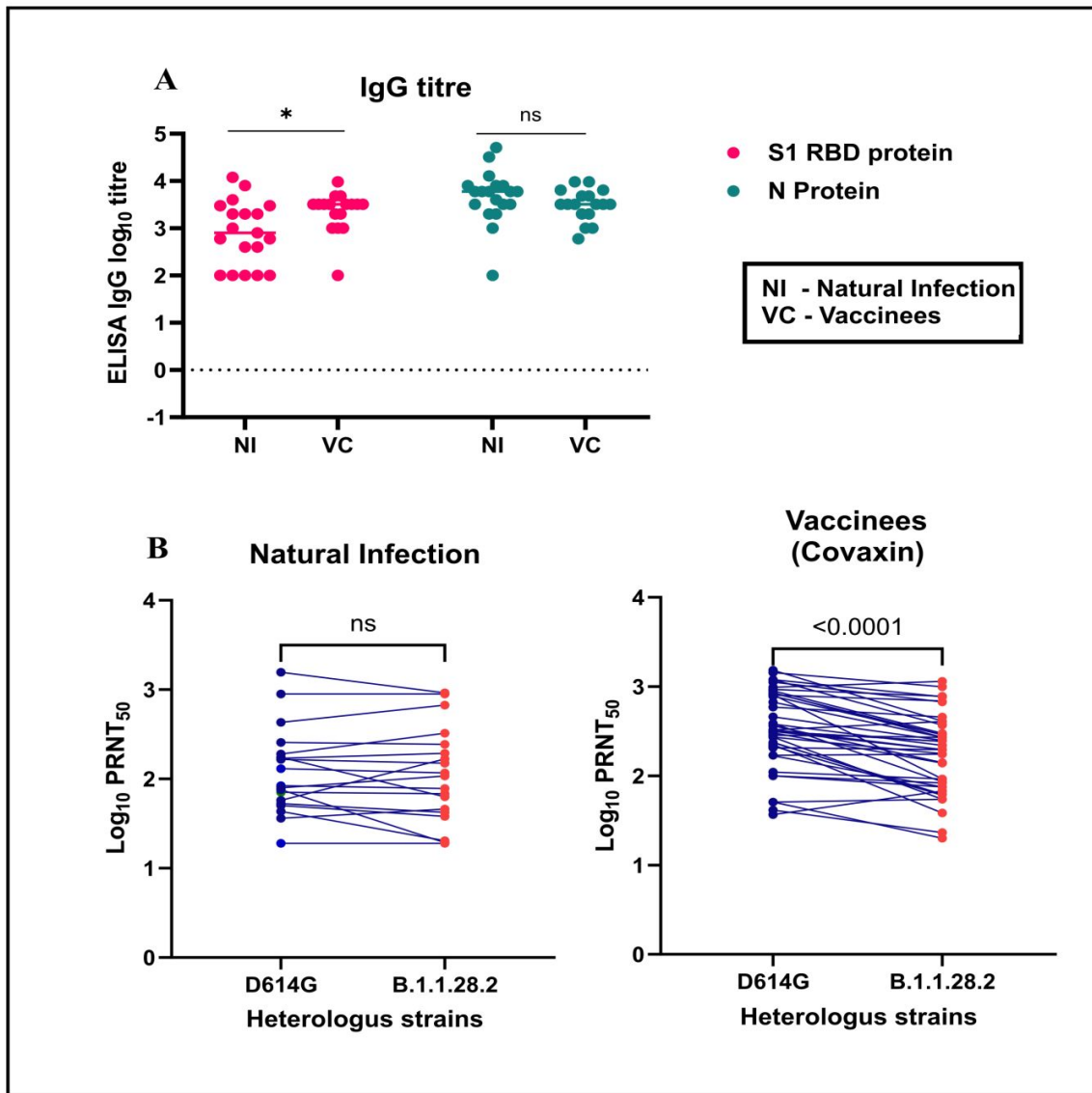
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Acknowledgement

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Panel A depicts the results of S1-RBD protein (Pink circles) and N protein (Blue circles) based SARS-CoV-2 IgG ELISA to determine the IgG titer in sera of naturally infected individuals (n=19) and Covaxin recipients (n=42). Mann-Whitney test was used for the comparison. **Panel**

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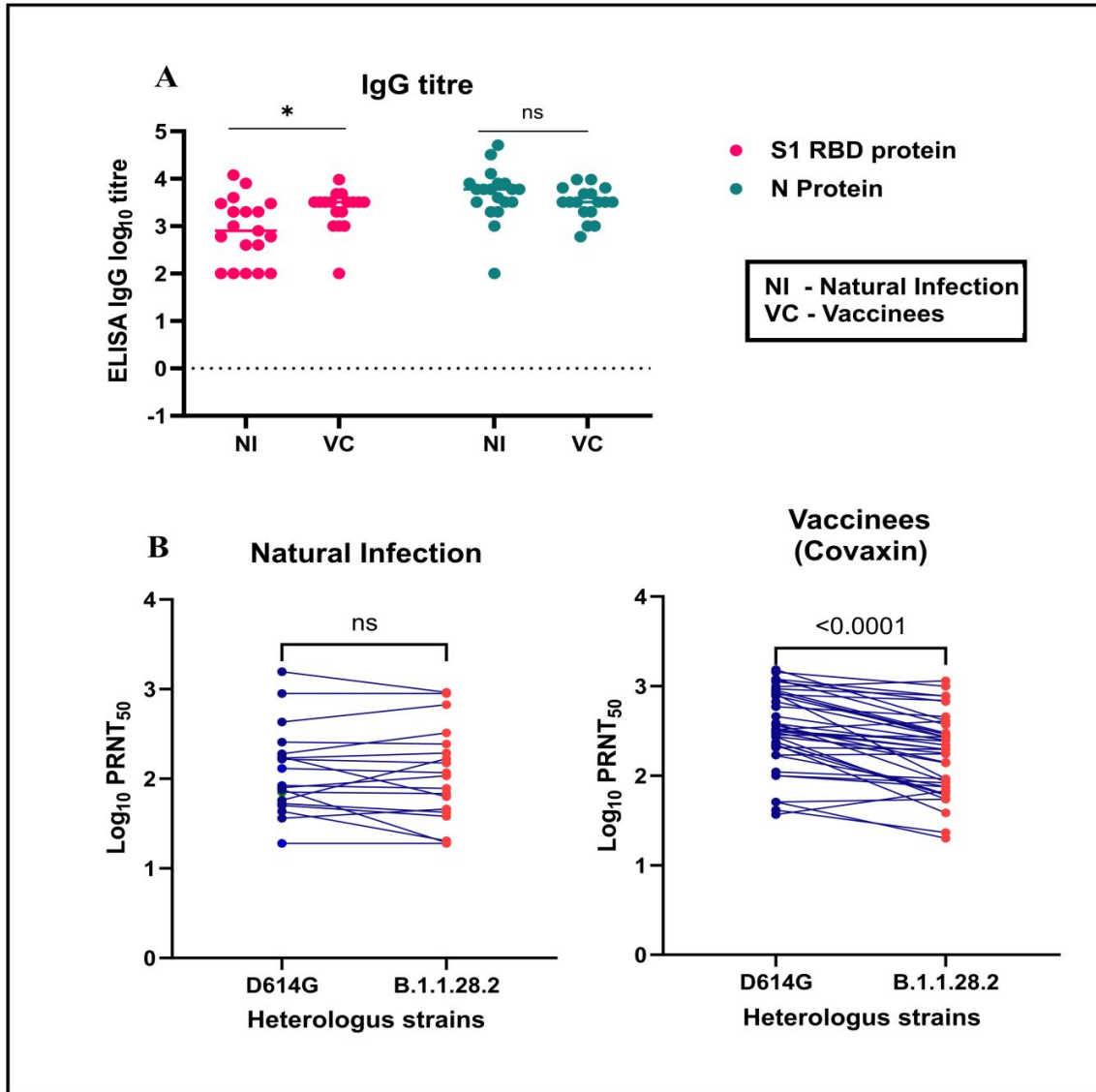
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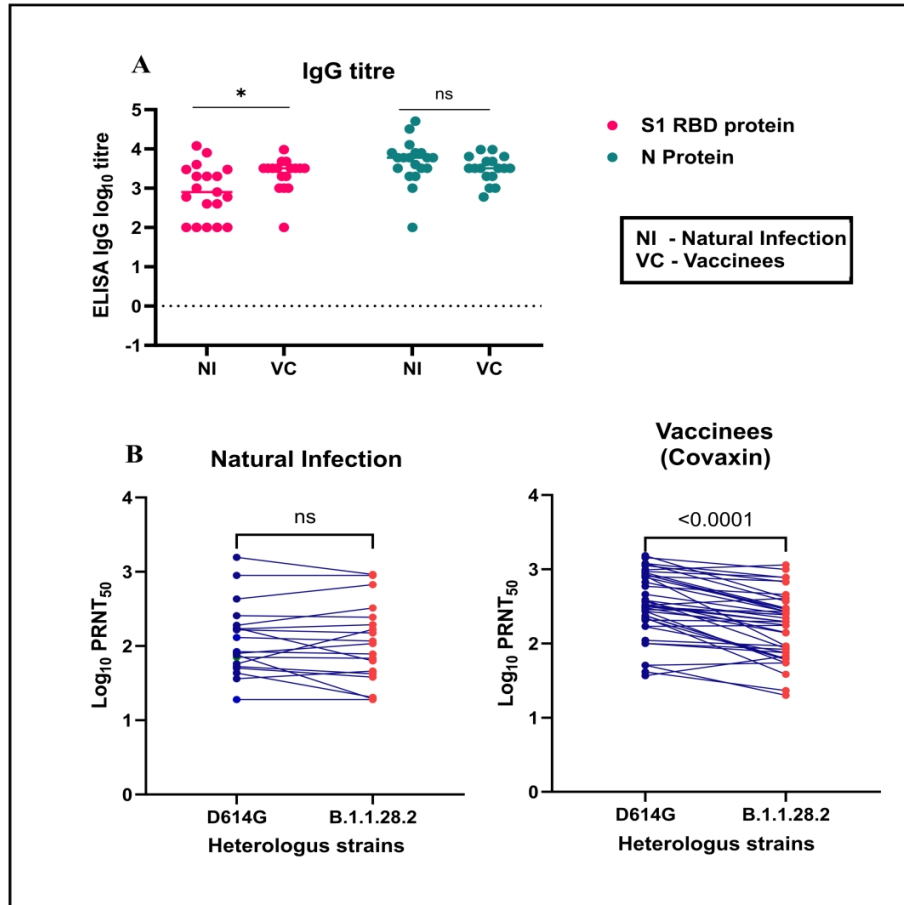


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