Letter to Editor

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Letter to the Editor Regarding "Evaluation of SARS-CoV-2 Specific Antibodies in Recovered Patients by Different ELISA Kits"

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Dear Editor

I read your research paper "Evaluation of SARS-CoV-2 Specific Antibodies in Recovered Patients by Different ELISA Kits" with great interest (1). Your study offers significant insights into post-COVID-19 immunity and the performance of various ELISA kits. However, I see several opportunities to further deepen the study's impact.

While ELISA kits generally focus on IgG antibodies, the role of IgA and IgM antibodies could provide a fuller picture of immunity to SARS-CoV-2 (2). The study could explore factors such as patient age, gender, virus variant, or disease severity that affect the level and longevity of antibodies produced (3). The paper could discuss the role and measurement of neutralizing antibodies, which play a critical role in preventing reinfection (4). A review of the correlation between the level of detected antibodies and subsequent clinical protection from reinfection could be significant (5). The results could be juxtaposed with the antibody response induced by COVID-19 vaccines to understand the difference between natural and vaccine-induced immunity.

These suggestions could provide broader, richer insights into immunity to SARS-CoV-2 and the utility of ELISA kits in our ongoing fight against COVID-19.

REFERENCES

1. Fereidouni A, Safari H, Rezapoor H, Mahmoudzadeh S, Fereidouni M. Evaluation of SARS-CoV-2 specific antibodies in recovered patients by different ELISA kits. Iran J Immunol. 2023;20(3):374–81.
2. Liu J, Li S, Liu J, Liang B, Wang X, Wang H, et al. Longitudinal characteristics of lymphocyte responses and cytokine profiles in the peripheral blood of SARS-CoV-2 infected patients. EBioMedicine. 2020;55(102763):102763.
3. Huang K-YA, Tan TK, Chen T-H, Huang C-G, Harvey R, Hussain S, et al. Breadth and function of antibody response to acute SARS-CoV-2 infection in humans. PLoS Pathog.2021;17(2):e1009352.
4. Schmidt F, Weisblum Y, Muecksch F, Hoffmann H-H, Michailidis E, Lorenzi JCC, et al. Measuring SARS-CoV-2 neutralizing antibody activity using pseudotyped and chimeric viruses. J Exp Med. 2020;217(11).
5. Lumley SF, O'Donnell D, Stoesser NE, Matthews

PC, Howarth A, Hatch SB, et al. Antibody status and incidence of SARS-CoV-2 infection in health care workers. N Engl J Med. 2021;384(6):533-40.

AUTHOR'S RESPONSE

Dear Editor

Thank you for your kind attention to our paper. Regarding your comments, we would like to add a few points. In the case of different classes of antibodies, as the antibody responses take time to develop, they are not useful in the early detection of infections, particularly in case of lethal contagious ones like SARS-CoV2 and therefore, specific antibodies, particularly IgG, are measured to evaluate the history of exposure and duration of humoral response mostly in seroepidemiological studies (1). To examine multiple variables, a large sample size is needed (2), while our study was a cross-sectional one based on the laboratory findings, with a small sample size. On the other hand, evaluating reinfection or identifying virus variants is not easily possible (3), and at the time of our study, vaccines were not widely available.

We appreciate your valuable comments, and we believe it is critical to create the necessary infrastructures for conducting large-scale multicenter studies to better manage possible future epidemics.

REFERENCES

1. Hajissa K, Mussa A, Karobari MI, Abbas MA, Ibrahim IK, Assiry AA, et al. The SARS-CoV-2 Antibodies, Their Diagnostic Utility, and Their Potential for Vaccine Development. Vaccines. 2022;10(8).
2. Lee PH. Sample sizes in COVID-19-related research. CMAJ. 2020 Apr 27;192(17):E461.
3. Jacobs JL, Haidar G, Mellors JW. COVID-19: Challenges of Viral Variants. Annual Review of Medicine. 2023;74(1):31-53.