



Letter to the Editor in Response to the "Comparison of the Antibody Responses Following Vaccination with AstraZeneca and Sinopharm"

Rujittika Mungmunpantipantip¹, Viroj Wiwanitkit²

¹Private Academic Consultant, Bangkok, Thailand; ²University Centre for Research and Development Department of Pharmaceutical Sciences, Chandigarh University Gharuan, Mohali, Punjab, India

**Corresponding author:*

Rujittika Mungmunpantipantip,
Private Academic Consultant, Bangkok, Thailand. Email: rujittika@gmail.com

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Dear Editor

We would like to discuss "Comparison of the Antibody Responses Following Vaccination with AstraZeneca and Sinopharm" (1). Anvari et al. compared the antibody response of healthy persons who received either the Sinopharm or the AstraZeneca vaccines in those who had never previously contracted SARS-CoV-2 (1). According to Anvari et al., recipients who received two doses of the AstraZeneca vaccine had higher quantitative antibody levels than those who received the Sinopharm vaccine. These findings imply that a booster dose may be required for Sinopharm (BBIBP-CoV) recipients in order to suppress the COVID-19 pandemic (1).

We all agree that it is a good idea to have a COVID-19 vaccination available for successful disease containment. Several elements, including the co-morbidity of the COVID-19 vaccine prior to receiving the shot, the type of COVID-19, how the shot was administered, and the local epidemiological pattern of the emerging disease, are concerning factors. There may be a connection between the incidence of asymptomatic COVID-19 and

the lack of clinical symptoms (2). Laboratory analysis is often foregone for ruling out a prior disease without clinical symptoms. A history of prior clinical sickness is not adequate on its own. Scientific investigations have to be carried out as necessary. Specific investigations should be conducted to improve the identification of the underlying defensive physiological problems that a vaccinated subject is facing. Continuous monitoring of any immunodeficiency among vaccine recipients helps predict the effectiveness of the immunization program. Although the clinical and physioimmunological information regarding pre-immunization conditions is sometimes not sufficient, the high effectiveness and advantage of immunization against SARS-CoV-2 have been established in several clinical articles. Furthermore, it is impossible to completely rule out the chance of the cross-existence of an unrecognized disease. However, the response to immunization of vaccine recipients related to genetic background underlying factors was demonstrated by a different recent study (3). Therefore, the effect of genetic variation

background should be a concern in future clinical studies.

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AUTHOR'S RESPONSE

Dear Editor

As discussed in our article, the purpose of our study was to compare the concentrations of specific antibodies in subjects who were vaccinated with the Astrazeneca versus those who were vaccinated with the Sinopharm vaccine. Several elements can affect the effectiveness of vaccines, including the comorbidity of the COVID-19 patients prior to receiving the shot, the type of COVID-19, the way of vaccine administration, and the local SARS-CoV-2 epidemiology. As the sampling from the studied groups were at the same time and the same place of living and all these factors were similar for participants, as a result, the possibility that these factors can affect our results is not very high (1-3). Another point that was noticed about the participant's immunological background. Undoubtedly, understanding the quality of every participant's immune

response to vaccination and considering the polymorphisms in the genes related to their immune system will make a deep view and more reliable comparison about the efficacy of vaccines (4). So, further large-scale studies will be required to assess the serial titer levels over a broad timeframe as well as the genetic background of vaccine recipients to have a better understanding of the protective antibody levels over time. By the way, to reduce the effects of these confounders, we entered the participants without any significant immunological problems like autoimmune diseases, cancers, and immune deficiency in our study. We know that these excluding criteria are not sufficient to roll out the effects of confounding factors on our study. However, the difference observed between the titer of antibodies we detected after vaccination in studied groups was clear enough to associate it with the efficacy of vaccines.

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