Medicina de Familia. SEMERGEN 50 (2024) 102132

Medicina de Familia
SEMERGEN

www.elsevier.es/semergen

LETTER TO THE EDITOR

Immunogenicity of BNT162b2 vaccine after two and three doses: Correspondence

Inmunogenicidad de la vacuna BNT162b2 después de dos y tres dosis: correspondencia

Dear Editor,

We would like to share ideas on the publication ''Immunogenicity of BNT162b2 vaccine after two and three doses in health personnel and institutionalized elderly people not infected with SARS-CoV-2.[1]'' The study aimed to compare the immunological response generated by the BNT162b2 vaccine after two and three doses in healthcare staff and institutionalized elderly people who had never been infected with SARS-CoV-2. The researchers employed a convenience sample to detect antibodies against SARS-CoV-2 S and N proteins two and six months after the second vaccine dosage, as well as two months after the third dose. Six months following the second vaccine dosage, both health workers and residents had a significant reduction in anti-S humoral immune response. A third vaccine dosage, however, resulted in a considerable rise in this antibody response in both groups, with a similar number of responders detected two months following the third dose.

It is possible that COVID-19 infection symptoms and vaccination results will vary from person to person, endangering the vaccine's previously established scientific efficacy.[2] It's possible that previous asymptomatic COVID-19 infections had an impact on the result. The way a person responds could also be influenced by their genetic makeup.[3] How long the vaccine will continue to prevent COVID-19 in humans is unknown because the investigation lacked a clear follow-up time. Confounding factors such comorbidities, socioeconomic level, and access to healthcare are a few examples that could have affected the results but weren't taken into account in this study.

Future research directions can examine the immune response's long-term viability following the third dose of the vaccine as well as the vaccine's efficacy in preventing serious illness and hospitalization. Further research into the immune responses of people who have already contracted SARS-CoV-2 could shed light on the possible advantages of vaccination in this cohort.

The study's findings are summarized by pointing out the considerable suppression of the anti-S humoral immune response that occurred six months after the administration of the second dose of the BNT162b2 vaccination and was enhanced by the third dosage. However, while interpreting the findings, it is important to take into account the study's limitations, such as the convenience sample and attention on particular antibodies. Future studies should take these restrictions into account and continue to investigate the vaccine's long-term efficacy and immune response.

Authors' contribution

HD 50% ideas, writing, analyzing, approval.
vW 50% ideas, supervision, approval.

Data availability statement

There is no new data generated.

Funding

None.

Conflict of interest

None.

Acknowledgement

None.

References

1. Rodríguez-Prieto M, Modino-García F, de la Arada-Benavides C, de la Puente R, Carvajal A, Rodríguez-Cabañeros I, et al. Immuno-

https://doi.org/10.1016/j.semerg.2023.102132

genicity of BNT162b2 vaccine after two and three doses in health personnel and institutionalized elderly people not infected with SARS-CoV-2. Semergen. 2023;50:102092, http://dx.doi.org/10.1016/j.semerg.2023.102092. Online ahead of print.
2. Joob B, Wiwanitkit V. Letter to the Editor: coronavirus disease 2019 (COVID-19), infectivity, and the incubation period. J Prev Med Public Health. 2020;53:70.
3. Čiučiulkaitė I, Möhlendick B, Thümmler L, Fisenkci N, Elsner C, Dittmer U, et al. GNB3 c.825c>T polymorphism influences T-cell but not antibody response following vaccination with the mRNA-1273 vaccine. Front Genet. 2022;13:932043.

H. Daungsupawong[a,*], V. Wiwanitkit[b]

[a] *Private Academic Consultant, Phonhong, Lao Democratic People's Republic*
[b] *Adjunct Professor, Chandigarh University, Chandigarh, India*

* Corresponding author.
E-mail address: hinpetchdaung@gmail.com
(H. Daungsupawong).