



Letter to the Editor

IgA nephropathy and hematuria after getting vaccine for SARS-CoV-2

Nefropatía por IgA y hematuria después de recibir la vacuna para SARS-CoV-2

Dear Editor,

We would like to comment on the publication “Hematuria in patients with IgA nephropathy after vaccine for SARS-CoV-2.”¹ The study looks at three examples of IgA nephropathy patients who acquired macroscopic hematuria after receiving the COVID-19 vaccination. It emphasizes that this side effect has been linked to the use of mRNA vaccines (Moderna®, Pfizer®) and viral vector vaccines (AstraZeneca®). The patients in the cases were asymptomatic, and the hematuria went away on its own after 24–72 h. Given the increased mortality risk from COVID-19, the findings suggests that finishing immunization in these susceptible patients is justified.

The article only includes three cases, which is a tiny sample size and may not be representative of the general community. The lack of data on the prevalence of hematuria after COVID-19 immunization in individuals with IgA nephropathy makes determining the importance of this side event challenging. The research does not include previous studies or literature on the relationship between immunizations and renal problems in IgA nephropathy patients, limiting the context for the findings. The article does not state if other potential causes of hematuria, such as urinary tract infections or renal stones, were explored. These could be confounding factors. The primary concern for any negative reaction to COVID-19 immunization is the confounding effects of underlying disease, as well as the possibility of previously undiagnosed silent COVID-19 infection, which could disrupt the normal immunological response to vaccine.

If this is a true case of vaccination-induced hematuria, the possible mechanism for vaccine-induced hematuria is intriguing. One theory is that the COVID-19 vaccine activates CD4 and CD8 T cells, resulting in a systemic cytokine cascade. This cascade may increase IgA1 production, resulting

in macroscopic hematuria in patients with IgA nephropathy. Another possibility is that the vaccine-induced immune response causes inflammation and immune complex deposition in the glomeruli, leading to blood vessel damage and hematuria. This mechanism is similar to how IgA nephropathy develops, in which immune complexes deposit in the glomeruli and cause inflammation.

Data availability statement

There is no new data generated.

Authors' contribution

H.D., 50% ideas, writing, analyzing, and approval. V.W., 50% ideas, supervision, and approval.

Conflict of interest

None.

Acknowledgement

None.

REFERENCE

1. Calle Garcia L, Martin Varas C, Urzola Rodriguez G, Marcos Hidalgo M, Rodriguez Gomez A, Molina Ordas A, et al. Hematuria in patients with IgA nephropathy after vaccine for SARS-CoV-2. *Nefrologia* (Engl Ed). 2023;43:657–9.

Hinpetch Daungsupawong^{a,*}, Viroj Wiwanitkit^b

^a Private Academic Consultant, Phonhong, Lao Democratic People's Republic

^b Adjunct Professor, Chandigarh University, India

* Corresponding author.

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

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