



# IgA nephropathy following COVID-19 vaccination: challenges and perspectives

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To the Editors:

We would like to thank Morizawa and colleagues for reporting two other pediatric patients who presented with IgA nephropathy (IgAN) flare-ups following mRNA COVID-19 vaccination [1]. Interestingly, both patients had been diagnosed with microscopic hematuria prior to COVID-19 vaccination, and already benefited from an adequate follow-up in pediatric nephrology. On the contrary, the patient we reported in a previous letter [2] had no documented microscopic hematuria prior to COVID-19 vaccination: school urinalysis routinely performed in Luxembourg was negative. This observation thus confirms that IgAN flare-ups can potentially occur after COVID-19 vaccination in previously symptomatic and asymptomatic patients alike, raising questions about the optimal COVID-19 vaccination strategy in the pediatric population.

Indeed, it remains unclear whether COVID-19 vaccination should be continued after the occurrence of IgAN flare-up following the first or second dose of COVID-19 vaccine. In the patient reported previously [2], the severity of the flare-up led us to contraindicate further COVID-19 vaccination until new medical evidence are available. However, more moderate flare-ups [3] might not necessarily contraindicate further COVID-19 vaccination in patients with a high risk of severe COVID-19, but the lack of strong scientific evidence makes the decision process difficult.

Another open question is the need for specific vaccination guidelines in pediatric patients with suspected or confirmed IgAN diagnosis prior to COVID-19 vaccination. On the one hand, COVID-19 vaccination could potentially trigger disease relapses; on the other hand, the SARS-CoV-2 virus itself has been reported as a likely cause of IgAN flare-ups [4], although mostly in adults.

In order to better address these questions, we believe that it is particularly important that pediatric nephrologists continue to report potential side effects of COVID-19 vaccination, as well as SARS-CoV-2 related chronic kidney disease flare-ups. The implementation of an international pediatric registry, as well as prospective studies, is needed to help clinicians to better evaluate the risk–benefit ratio of COVID-19 vaccination in pediatric patients with chronic kidney diseases at risk of relapsing, in all pediatric age groups.

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## Declarations

**Conflict of interest** The authors declare no competing interests.

**Informed consent** Informed consent was obtained from legal guardians.

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## References

1. Morisawa K, Honda H (2022) Two patients presenting IgA nephropathy after COVID-19 vaccination during a follow-up for asymptomatic hematuria. *Pediatr Nephrol*. <https://doi.org/10.1007/s00467-022-05518-0>

2. Niel O, Florescu C (2021) A case of gross hematuria and IgA nephropathy flare-up following SARS-CoV-2 vaccination. *Pediatr Nephrol.* <https://doi.org/10.1007/s00467-021-05351-x>
3. Hanna C, Hernandez Herrera LP (2021) IgA nephropathy presenting as macroscopic hematuria in 2 pediatric patients after receiving the Pfizer COVID-19 vaccine. *Kidney Int.* <https://doi.org/10.1016/j.kint.2021.06.032>
4. Huang Y, Li XJ, Li YQ, Dai W et al (2020) Clinical and pathological findings of SARS-CoV-2 infection and concurrent IgA nephropathy: a case report. *BMC Nephrol.* <https://doi.org/10.1186/s12882-020-02163-3>

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