immunosuppression. Nevertheless, as with other vaccinations, the benefit of immune protection, most probably, outweighs the risk of relapse.


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*Kidney International* (2021) **100,** 458–459; https://doi.org/10.1016/j.kint.2021.05.006



# Relapse of minimal change disease following the AstraZeneca COVID-19 vaccine

**To the editor:** Anecdotal reports linking minimal change disease (MCD) to vaccinations possibly due to immune dysregulation,[1] including influenza vaccine,[2] pneumococcal,[3] meningococcal C vaccines,[4] and BNT162b2 coronavirus disease 2019 (COVID-19) vaccine (Pfizer-BioNTech)[5,6] have been published. We report 2 cases of biopsy-proven MCD relapsing within 2 days of receiving an AstraZeneca COVID-19 vaccine.

A 30-year-old man had received 1 g of rituximab in August 2020, having experienced annual relapses on tacrolimus. His prednisolone had been weaned to 1 mg/day by January and discontinued altogether by February 2021. Two days after his COVID-19 vaccine, he developed a headache and frothy urine. Urine protein-to-creatinine ratio 1 week later was 213 mg/mmol; albumin was preserved at 47 g/l; creatinine was stable at 82 μmol/l. At that time, lymphocyte subsets showed complete B-cell depletion; CD19 was 0.00. He did not seek medical attention until 2 months after receiving the vaccine when his urine protein-to-creatinine ratio was 142 mg/mmol. Repeat lymphocyte subsets then revealed B-cell return; CD19 was 0.06. Complete remission was achieved with 10 days of starting prednisolone 20 mg daily.

A 40-year-old woman was maintained on prednisolone 5 mg daily and tacrolimus (Adoport); trough level was 4.6 μg/l before vaccination. One day after receiving her first COVID-19 vaccine, she developed a headache, frothy urine, and ankle swelling. After 1 week, her general practitioner recorded 3+ dipstick proteinuria. Unfortunately, no laboratory samples were sent. Prednisolone was increased to 30 mg daily, and complete remission was achieved within 2 weeks. Creatinine was unchanged at 105 μmol/l.

The association with various vaccines has been described, occurring between 4 days to several weeks later.[1,5,6,7] The timing of COVID-19 vaccination and the very early development of relapse of MCD in our cases raises questions as to the mechanisms involved. At 2 days after vaccination, one would assume the vaccine triggered a more generalized cytokine-mediated response.[7] Others have postulated that symptoms after 4 days represent a rapid T cell–mediated response to viral mRNA.[2,5,6]

We administered the second dose of a different COVID vaccine, and neither patient suffered an adverse effect. However, both patients were taking 15 mg prednisolone daily at the time. This may prove a useful strategy in similar cases.

We await further reports to evaluate the true incidence.


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*Kidney International* (2021) **100,** 459; https://doi.org/10.1016/j.kint.2021.06.005



# Post-vaccinal minimal change disease

**To the editor:** Previous reports have described the onset of minimal change disease after the administration of certain vaccines.[1]

Recently a 61-year-old woman was admitted to our hospital 8 days after her first coronavirus disease 2019 (COVID-19) vaccination (BioNTech/Pfizer SARS-CoV-2 COMIRNATY) because of edema and weight gain (6 kg). Medical