

### Background:

Here, we discuss a patient with a past medical history of Anti-LG1 limbic encephalitis that presented with seizure-like activity approximately three weeks after the administration of the mRNA-1273 COVID-19 vaccine.

### Case Description:

A 75-year-old male with a history of Anti-LG1 limbic encephalitis presented to our hospital with bilateral, truncal myoclonus and lateral nystagmus. EEG showed periodic lateralized epileptiform discharges. Brain MRI was unremarkable. The lumbar puncture was not suggestive of meningoencephalitis and the patient was diagnosed with a clinical relapse of Anti-LG1 limbic encephalitis, started on IVIG, methylprednisolone, azathioprine, and antiseizure medications. After absence of seizure activity was documented, he was discharged with instructions to follow up with neurology and advised to withhold the second dose of the COVID-19 vaccine.

### Discussion:

Our patient was previously diagnosed with anti-LGI1 in 2011 and had been clinically stable without seizures since 2016. His relapse could have been triggered by an immunological response to the COVID-19 vaccine. Although vaccine administration does not pose a more prominent danger than natural SARS-CoV-2 infection the temporal association raises the possibility of the vaccine as a trigger for the patient's autoimmune limbic encephalitis relapse. Unfortunately, little is known about how to predict, prevent or ameliorate these events in certain immunologically predisposed individuals or if the temporal association reported here represents an adverse event of the mRNA-1273 COVID-19 vaccine. Ongoing reporting and further research are warranted to evaluate if this association can be confirmed, and if so, understand if there is a plausible underlying immunological mechanism.