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### The effects of coronavirus disease 2019 and its vaccination on pediatric epilepsy

#### Abstract:

**Aim:** Concerns regarding the effects of mRNA-based COVID-19 vaccination on paediatric epilepsy course were raised by physicians and patients. This study aimed to evaluate such possible effects, and to characterise the manifestations of acute infection with SARS-CoV-2 in children with epilepsy.

**Method:** This was an observational cross-sectional study. Patients between 5–18 years who visited our paediatric epilepsy clinic between 1 September and 30 November 2022 were recruited. The patient or their parent filled out an anonymous one-page questionnaire on the manifestations of SARS-CoV-19 infection, the adverse events of COVID-19 vaccine, and some clinical and demographic information.

**Results:** Overall, 160 patients completed the questionnaires. Symptoms of acute infection were mostly mild. Seizure exacerbation during the infection was reported in 17%, and three children were admitted to the hospital. No seizure exacerbation was reported in the week following 104 vaccination doses. The vaccination rate was significantly lower than the general population of the same age, especially in children under 12.

**Conclusions:** The risk for seizure exacerbation following vaccination was minimal. The risk for seizure exacerbation during an infection was substantial. Clinicians should reassure patients, parents, and caregivers regarding the low risk of seizures following COVID-19 vaccination.

#### Biography

**Tal Gilboa** is a distinguished pediatric neurologist based at Hadassah Medical Center in Jerusalem, Israel. He currently serves as the Director of the Pediatric Neurology Unit, where he oversees the evaluation and treatment of children with various neurological conditions, including developmental disabilities, epilepsy, and movement disorders. Gilboa has contributed significantly to the field through his research, authoring numerous publications on topics such as epilepsy, neurogenetics, and pediatric neurology. His work has been widely cited, reflecting his influence in advancing pediatric neurology. In addition to his clinical and research roles, Dr. Gilboa is actively involved in education and mentorship, training the next generation of pediatric neurologists. His dedication to improving child health through clinical excellence, research, and education underscores his commitment to the field of pediatric neurology.