

## SARS-CoV-2 Vaccines and Motor Symptoms in Parkinson's Disease

We read with great interest the report of Erro and colleagues titled "Severe Dyskinesia After Administration of SARS-CoV2 mRNA Vaccine in Parkinson's Disease" in which they report two patients with Parkinson's disease (PD) who developed severe dyskinesia after receiving the BNT162b2 mRNA vaccine.<sup>1</sup>

We would like to comment on our experience trying to assess whether severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) vaccines have any positive or negative impact on motor symptoms in patients with PD.

We reviewed the medical dossiers of more than 200 consecutive patients with PD followed in the past 2 months by telemedicine because of the pandemic and who had already received one or two doses of any of the SARS-CoV-2 vaccines available in Peru (BNT162b2 [Pfizer/BioNTech, USA] and BBIBP-CorV [Sinopharm, China]). We specifically searched for any variation on motor symptoms including dyskinesia for at least 3 days after any of each dose.

A total of 181 patients with PD met the inclusion criteria; 107 men and 74 women were included. Mean age was 65 years old (range, 31–99). A total of 178 patients received two doses of the SARS-CoV-2 vaccine (177 Pfizer/BioNTech and 1 Sinopharm), and three patients received only one dose of the Pfizer/BioNTech vaccine. A total of 11 patients (6%) had COVID-19 during the pandemic. The effect of the infection on parkinsonian symptoms was not evaluated for this report. Only two patients (1.1%) reported some degree of deterioration following one of the doses of the vaccine. The first patient presented with increased rigidity and gait impairment soon after the first dose that lasted a few days. The second patient presented with increased resting tremor that lasted for 2 weeks also after the first dose. In both cases, symptoms improved spontaneously without any modification of their antiparkinsonian medications. No one reported the appearance or increase of dyskinesia.

Studies focusing on the relationship between SARS-CoV-2, COVID-19, and PD have provided conflicting results.<sup>2</sup> The approved mRNA-based and viral vector vaccines are not expected to interact in PD but have created some concerns with regard to the benefits and risks. These vaccines are not known either to interfere with the neurodegenerative process

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**Relevant conflicts of interest/financial disclosures:** The authors declare that there are no financial disclosures of any type to report.

**Received:** 3 October 2021; **Accepted:** 5 October 2021


Published online 14 November 2021 in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/mds.28851

or modify motor symptoms or the response to current therapies for PD. Nevertheless, some patients have developed exacerbation of motor symptoms or severe dyskinesia after vaccination, and the reasons remain unclear, but they might be explained by triggering a systemic inflammatory response, excessive anxiety, or due to an interaction with regular antidopaminergic medication.

These cases, even if they represent a very low incidence, should not discourage patients to receive vaccines, and we recommend people with PD COVID-19 vaccination with approved vaccines unless there is a specific contraindication.

### Data Availability Statement

Data available on request from the authors

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## Paroxysmal Kinesigenic Dyskinesia Secondary to Brain Calcification with a Homozygous MYORG Mutation

We read with interest the letter by Du et al presenting the case of a man with primary familial brain calcification (PFBC)

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**Relevant conflicts of interest/financial disclosures:** None of the authors have any conflicts of interest to disclose.

**Funding agencies:** Supported by the National Science Foundation of China (grant numbers: 8210051470, 81801294, and 81871017) and the International Cooperation Project, Sichuan Science and Technology Department (2021YFH0141).

**Received:** 12 September 2021; **Accepted:** 13 September 2021

Published online 14 November 2021 in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/mds.28860