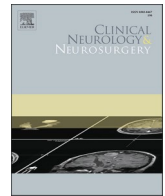




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Correspondence/Letter to Editor

**Dystonia as a complication of COVID-19 vaccinations is not as rare as portrayed**

## ARTICLE INFO

**Keywords**

SARS-CoV-2 vaccination  
 Dystonia  
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We read with interest the article by Algahtani et al. reporting a 38 years old male who developed torticollis 24 h after receiving the first dose of the Biontech Pfizer vaccine (BPV) [1]. His twisting movements improved when he supported his chin with his hand (“geste antagonistique”) [1]. Torticollis also improved after use of clonazepam and botulinum toxin injection to the scalenus medius, semispinalis cervicis, levator scapulae, and trapezius muscles [1]. The study is attractive but raises concerns that should be discussed.

We disagree that cervical dystonia has not been reported as a side effect of SARS-CoV-2 vaccinations [1]. In the “COVID-19 AstraZeneca Vaccine Analysis Print”, which contains spontaneous reports received between 4.1.20221 and 11.5.2022 about side effects on the Astra Zeneca COVID-19 vaccine (AZV), 14 patients with torticollis, 22 with dystonia, and 3 patients with dystonic tremor are listed [2]. Among all spontaneous reports received between 9.12.2020 and 20.4.2022 for the mRNA Pfizer/BioNTech vaccine analysis, 7 patients with a torticollis, 16 with dystonia, and 1 with a writer's cramp were listed [3]. In addition, an analysis of the VigiBase database which collects the adverse events reported for COVID-19 vaccines to the WHO pharmacovigilance database (VigiBase), found two patients with dystonia [4]. Unfortunately, no details on the dystonia subtype in these patients were provided in this report.

There is no information as to whether magnetic resonance imaging (MRI) of the brain and spine was performed with or without contrast medium and which modalities were used. Contrast medium use is critical to not missing inflammation or an enhancing malignoma. We should also know if diffusion weighted imaging (DWI), perfusion weighted imaging (PWI), susceptibility weighted imaging (SWI), magnetic resonance angiography (MRA), and magnetic resonance venography (MRI) were performed. SARS-CoV-2 vaccination can be complicated by ischemic stroke, bleeding, venous sinus thrombosis, or new multiple sclerosis or relapses of multiple sclerosis [5,6].

The results of the cerebrospinal fluid (CSF) investigations are also missing. An uncaused central nervous system (CNS) abnormality

requires comprehensive evaluation, including CSF analysis to rule out an inflammatory process that may not be visible on imaging. The D-dimer is missing to assess whether there was evidence of cerebral thrombosis.

Overall, the interesting study has some limitations and inconsistencies that call the results and their interpretation into question. Addressing these limitations could further strengthen and reinforce the statement of the study. Dystonia, including torticollis, can be a complication of SARS-CoV-2 vaccinations more frequent than anticipated.

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**Abbreviations:** AZV, AstraZeneca vaccine; BPV, Biontech Pfozeer vaccine; CNS, central nervous system; CSF, cerebrospinal fluid; DWI, diffusion weighted imaging; MRI, magnetic resonance imaging; MRA, magnetic resonance angiography; PWI, Perfusion weighted imaging; SWI, susceptibility weighted imaging.

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