


CASE REPORT

Bell's palsy following the Ad26.COVS COVID-19 vaccination

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Learning point for clinicians

We describe a case of Bell's palsy after Janssen COVID19 (Ad26.CoV2.S) vaccination. To the best of our knowledge, this is the first case report describing an incidence of Bell's palsy after the injection of Ad26.CoV2.S vaccination, and we highlight this case to further discussion and review.

Case presentation

A 62-year-old Pilipino female with a past medical history of type 2 diabetes mellitus, hypertension and hyperlipidemia presented to the emergency department with a 2-day history of right facial droop 20 days following the Ad26.COVS vaccination. The patient denied prior history of stroke, transient ischemic attack, Bell's palsy or other unexplained neurological symptoms. She also denied any recent viral infection or facial trauma. At the time of presentation, she denied tingling, ear pain, hearing loss, dysgeusia, drooling, vision problems or rashes. Her physical examination was notable for near-complete paralysis of the right lower face and significant paralysis of the right upper face with incomplete eye closure, consistent with a House–Brackmann score 4 Bell's Palsy (Figure 1). Her motor, sensory, gait and cerebellar examination were otherwise normal. Head computed tomography and brain magnetic resonance imaging were unremarkable, without infarct, demyelination or peripheral nerve enhancement. She was diagnosed with Bell's Palsy related to Coronavirus Disease 2019 (COVID-19) vaccination.

Discussion

Although most cases are idiopathic, peripheral facial nerve palsy can be observed in the context of viral infection, trauma, pregnancy and other inflammatory, autoimmune and neoplastic conditions. Facial nerve palsy has also been reported as an adverse event following vaccination, most often following the influenza vaccine.^{1,2} We report a patient who developed facial nerve palsy 20 days after the administration of the Janssen coronavirus (Ad26.COVS) vaccine. Although we cannot directly attribute our patient's presentation to the vaccine, her presentation was temporally related. We believe that this case can bring awareness to a potential adverse effect, and we highlight this case to further discussion and review.

The COVID-19 pandemic has caused substantial morbidity and mortality around the world, and the development of vaccines has drawn the global attention to stop the spread of the virus. The Ad26.COVS vaccine has been issued emergency use authorization by the U.S. Food and Drug Administration (FDA) as a third vaccine against COVID-19 on 27 February 2021 with a relatively benign side effect profile.³ Although the phase 3 clinical trial for Ad26.COVS reported three cases of Bell's palsy, this was not significantly different from placebo and there is no evidence to support a causal relationship between the vaccine and facial nerve palsy.⁴ However, given the expedited production of the vaccine and the novelty associated with its production, side effects and adverse effects are still under investigation. Some recent studies have supported an association of Bell's palsy after the mRNA COVID-19 vaccines, even after the FDA's phase 3 trial did not find the frequency of Bell's palsy above the general population.⁵ A review of the Vaccine Adverse Event Reporting System database for

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Figure 1. Right-side facial nerve paralysis. Note that the patient was unable to close her right eye.

reporting of adverse effects report a significantly higher rate of Bell's Palsy after the mRNA vaccines than after the Ad26.COV2.S COVID-19 vaccination. Although rare thrombotic complications have been reported after the injection of Ad26.COV2.S COVID-19 vaccination,⁶ relatively few reports of Bell's Palsy have been described.

We present the first case report describing an incidence of Bell's Palsy after the Janssen Ad26.COV2.S vaccination. This case highlights the importance of continuing to monitor for side effects and complications on an individual basis following this novel vaccine.

Patient consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Statement of ethics

Written informed consent was obtained from the patient for publication of this report and accompanying images.

Acknowledgement

The authors thank the patient for allowing us to publish this case report.

Conflict of interest

The authors have no conflicts of interest associated with this manuscript.

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