Mild Facial Paresis in a Recipient of Gam-COVID-Vac Vaccine: A Case Report

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Negin Mahmoudi Hamidabad[1], Amir Reza Mafi[2] and Meysam Abolmaali[3]

[1]Department of Neurology, Firoozgar Hospital, Iran University of Medical Sciences, Tehran, Iran. [2]Farabi Eye Hospital, Tehran University of Medical Sciences, Tehran, Iran. [3]Shefa Neuroscience Research Center, Khatam Alanbia Hospital, Tehran, Iran.

ABSTRACT: Facial paralysis has been reported as a rare side effect of mRNA COVID-19 vaccines. The Gam-COVID-Vac was introduced in August 2020 in Russia. There was no report of facial paralysis in phase I to III clinical trials of the vaccine. To our knowledge, there is no post-marketing report of facial paresis with Gam-COVID-Vac vaccination to this date. The Gam-COVID-Vac vaccine has a reported efficacy of 90%, but its safety and efficacy have not been approved by international organizations to this date. Iran is among the countries using the Gam-COVID-Vac vaccine. Here, we present a case of mild facial paresis that occurred shortly after the Gam-COVID-Vac vaccine administration in a female healthcare worker.

KEYWORDS: COVID-19 vaccine, Gam-COVID-Vac, facial paresis

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CORRESPONDING AUTHOR: Negin Mahmoudi Hamidabad, Department of Neurology, Firoozgar Hospital, Iran University of Medical Sciences, Tehran 1593747811, Iran.
Email: negin.mahmoodi65@gmail.com

Background

Facial paralysis has previously been reported as a rare side effect of vaccines such as influenza.[1] Among COVID-19 vaccines, there have been reports of facial paralysis associated with BNT162 and 2019-nCoV Vaccine mRNA-1273 vaccines.[2] To our knowledge, there is no report of facial paresis due to the Gam-COVID-Vac vaccination. The Gam-COVID-Vac vaccine (rAd26 and rAd5 vector-based) was introduced in Russia in August 2020. In September 2020 the first peer-reviewed study of its I/II phase clinical trials was published and no serious side effects were reported.[3] The results of the Gam-COVID-Vac phase III clinical trial also had no report of serious side effects.[4] The Gam-COVID-Vac vaccine is reported to have above 90% efficacy, but still, there is no official report on its safety and efficacy by international organizations.[5]

Iran is among the countries using the Gam-COVID-Vac vaccine. Despite using this vaccine in many countries, there has been no official report of facial paresis/palsy in association with it. Here, we present a case of mild facial paresis that occurred shortly after Gam-COVID-Vac vaccine administration in a female healthcare worker.

Case Presentation

A 34-year-old female healthcare worker presented to the emergency department with a unilateral facial weakness a day after receiving the first dose of the Gam-COVID-Vac vaccine. She had a history of migraine attacks (under treatment with Topiramate 25 mg twice a day and Propranolol 40 mg daily). She received the vaccine on February 28th, 2021. A few hours after receiving the vaccine, she developed myalgia, low-grade fever, and rhinorrhea which resolved spontaneously within 3 hours. The next morning, she woke up with a right-sided otalgia and posterior auricular pain which was then followed by unilateral facial weakness (Figure 1). In physical examination, the patient had no fever and vital signs were stable. The forehead skin was normal. The Marionette line and nasolabial fold were slightly flattened on the right side and the patient had a mild asymmetrical smile. The eyelids were normal on examination. Ears were normal on examination. There was no evidence of skin rash on physical examination. The review of systems was normal except for the auricular pain and facial weakness. Brain magnetic resonance imaging appeared normal. Complete blood count and C-reactive protein also were normal.

She did not receive oral glucocorticoids due to the mild state of the symptoms. The patient was followed for 1 month and her facial paresis resolved after 4 sessions of physiotherapy (Figure 1). A month later, she received the second dose of the vaccine and reported no serious adverse effects.

Discussion

In this study, a case of mild facial paresis following the Gam-COVID-Vac vaccination has been reported that resolved after a few sessions of physiotherapy and did not recur after receiving the second dose of the vaccine.

Gam-COVID-Vac was the first registered COVID-19 vaccine in the world but has not been approved by the World Health Organization, yet. Based on the literature, there has not been any report of facial paresis or palsy associated with the Gam-COVID-Vac vaccine. In a study, the prevalence of facial paralysis-related side effects was 0.6% among all side effects and was higher in female vaccine recipients (67.8%). Also, the

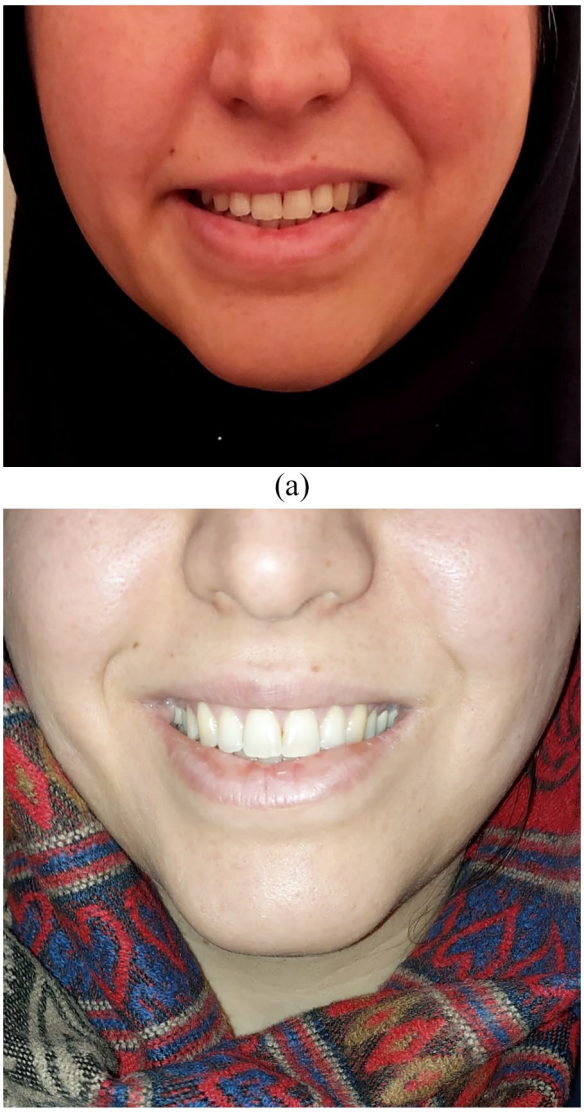

Figure 1. Right sided flattening in Marionette line and nasolabial fold a day after administration of vaccine (a), No obvious sign of asymmetry after 1-month follow-up (b).

prevalence of facial palsy was 0.5% with other viral vaccines and 0.7% with the Influenza vaccine.[2] Facial palsy can occur due to viral infections, trauma, pregnancy, or without known etiology. It is usually self-limiting in nature and may resolve spontaneously.[6] There are many reports regarding the incidence of facial palsy in association with viral vaccines. But studies have not been able to demonstrate a higher risk for its incidence due to vaccination.[7] The patient, in this case, showed mild symptoms and the second dose of the vaccine did not aggravate the symptoms; therefore a causal association between the vaccine and paresis could not be established. However, vaccine-associated facial paresis was diagnosed in this case due to the lack of any other trigger. This case report can make physicians aware of the probable side effect of viral vector COVID-19 vaccines. Of course, the prevalence of this side effect is very low, and the benefits of vaccination outweigh its side effects.

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Author Contributions

All authors contributed to the study conception and design. Negin Mahmoudi Hamidabad wrote the manuscript and involved in the management of the patient, Amir Reza Mafi did the background research, and Meysam Abolmaali wrote, edited, and revised the manuscript. All authors read and approved the final manuscript.

Data Availability Statement

The data is available only by the request. This includes the attached serial number of the vaccine on the vial.

Ethical Approval

This study protocol was reviewed and the need for approval was waived by the Ethics Committee of the Iran University of Medical Sciences. Informed consent was obtained from the patient.

Informed Consent

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

ORCID iD

Negin Mahmoudi Hamidabad https://orcid.org/0000-0003-2590-2943

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