



LMN Facial Palsy After Second Dose of COVID Vaccine: A Case Report

Milan S Babu¹, Syeda Shamim Fatima², Tanuj Madan^{1*}, DVS Mithilesh³,
Jijesh Jayadevan⁴ and RN Harish⁵

¹Assistant Professor, Department of ENT, Military Hospital - Jabalpur, Madhya Pradesh, India

²Assistant Professor, Department of ENT, Military Hospital - Kirkee, Pune, Maharashtra

³Consultant, Department of ENT, 165 Military Hospital - Dimapur, Assam, India

⁴Assistant Professor, Department of ENT, INHS- Kalyani, Vizag, Andhra Pradesh, India

⁵Junior Resident-I, Department of ENT, Command Hospital- Kolkata, Alipore, Kolkata, West Bengal, India

***Corresponding Author:** Tanuj Madan, Assistant Professor, Department of ENT, Military Hospital - Jabalpur, Madhya Pradesh, India.

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Milan S Babu., et al.

Abstract

COVID-19 was declared a pandemic by WHO during April 2020. Large scale spread of disease necessitated the development of novel COVID-19 vaccines. Few cases of LMN facial palsies were reported during its clinical trial as well as during its use in general population. A case of LMN Facial palsy in a 22 year old male patient managed at our centre following second dose of COVID-19 vaccination is being reported here.

Keywords: COVID-19; Facial Palsy; Bell's Palsy; COVID Vaccination

Introduction

COVID-19 was declared a pandemic by WHO during April 2020 and total number of confirmed cases were close to 98 million in India during Oct 2022. This large scale spread of disease necessitated the development of novel COVID-19 vaccines at national levels. Development of vaccine was based on already known main vaccine platforms which included inactivated viral vaccines, live attenuated viral vaccines, viral-vector based vaccines, protein-based vaccines and nucleic acid vaccines [1].

COVID-19 vaccination programme was implemented in the country following development of indigenously made COVAXIN and COVISHIELD vaccines. COVAXIN is an inactivated viral vaccine where as COVISHIELD is a viral vector vaccine.

Only Pfizer/BioNTech and Moderna COVID-19 vaccines have US FDA approval for its emergency use in humans [2,3]. There were few cases of LMN facial nerve palsies reported during its clinical trail as well as during its use in general population. But no cases of facial nerve palsies were reported in India following vaccination with its indigenously developed COVID-19 vaccine. Here

we present a case of LMN facial nerve palsy in India following the administration of recombinant ChAdOX1 nCoV-19 or AstraZeneca COVISHIELD vaccine.

Case Report

A 22 year old serving soldier with no known comorbidities and medically fit as per Indian Military Standards reported to Military Hospital in western Maharashtra on 03 Jun 2021 with history of left sided facial paresis since 27 May 2021 along with pain left ear and altered taste sensation of 02 days duration. The individual received his first and second doses of COVISHIELD vaccine on 02 Mar 2021 and 05 Apr 2021 respectively. On subsequent enquiry patient gave history of left sided facial nerve palsy on 12 Apr 2021 for which he was treated with oral steroid and anti-virals on OPD basis in a Tertiary Care Hospital and recovered completely with in a span of 04 weeks.

On examination patient had House Brackmann (HB) Grade III facial nerve palsy on left side (Figure 1). Otoscopy, Tuning fork tests and Otoneurological examinations were normal. Patient was admitted, counselled and started on treatment with oral cortico-

steroids (Tab Prednisolone 60mg/day for 10 days followed by tapering doses) and oral anti-virals along with eye care and daily blood glucose monitoring. Routine blood investigations were within normal limits. COVID-19 RT-PCR was done as per institutional protocol, which came out to be negative. Contrast Enhance Magnetic Resonance Imaging (CEMRI) of brain was done to look for

demyelination and cerebello-pontine angle pathology were unyielding. Patient became symptomatically better after seven days of oral corticosteroids and was discharged on 12 Jun 21 with tapering doses of steroids. On discharge his facial nerve palsy improved to HB grade II.



Figure 1: Clinical examination of patient showing House Brackmann Grade III facial nerve palsy (L).



Figure 2: Clinical examination of patient on day of discharge showing improvement to House Brackmann Grade II.

Discussion

COVID-19 vaccine adverse effects as well as its interaction in individual patient with various co-morbid diseases who are on different medications are still in the evolving phase. Adverse Effects Following Immunisation (AEFI) surveillance system is an effective way of understanding and documenting the rare vaccine interactions. Although isolated cases of facial nerve paralysis reported with mRNA COVID-19 vaccines were not sufficient enough to demonstrate a causal relationship, it definitely helped in focusing on strict pharmacovigilance for the same [4].

COVISHIELD, is a recombinant, replication deficient chimpanzee adenovirus vector encoding the SARS-CoV-2 spike glycoprotein. Vaccination regimen consists of 02 doses, each of 0.5 ml of intramuscular injection taken 12-16 weeks apart. Facial nerve palsy was never an AEFI with this vaccine as per manufacturers.

Although this case report doesn't establish a causal relationship, but it definitely shows the temporal association of LMN facial palsy following COVISHIELD vaccination.

Conclusion

LMN facial nerve palsy following COVID-19 vaccination is rare and the benefits of vaccination is far superior compared to its risk factors. At the same time, we feel that a continuous AEFI surveillance will help in obtaining further data related to LMN facial nerve palsy following COVID-19 vaccination in Indian population.

Conflict of Interest

The authors declare that they have no conflict of interest.

Ethical Approval

Not applicable as it involves one case report.

Informed Consent

Informed consent was obtained from the individual participating in the study.

Bibliography

1. World Health Organization. "COVID-19 vaccines: safety surveillance manual".
2. US Food and Drug Administration. "Pfizer-BioNTech COVID-19 vaccine emergency use authorization review memorandum" (2020).
3. US Food and Drug Administration. "Moderna COVID-19 vaccine emergency use authorization review memorandum" (2020).
4. Mazur M., et al. "Facial and Oral Manifestations Following COVID-19 Vaccination: A Survey-Based Study and a First Perspective". *International Journal of Environmental Research and Public Health* 18.9 (2021): 4965.