DOI: http://doi.org/10.4038/jmj.v34i1.157

Case Report

Guillain- Barré Syndrome (GBS) after Sinopharm vaccination

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Abstract

Neurological complication following Sinopharm vaccination is extremely rare and Guillain-Barre syndrome (GBS) is among the least common complication. Here we report a case of a 62-year-old male with GBS secondary to Sinopharm vaccination. A diagnosed patient with schizophrenia presented with three-day history of lower limb weakness with preceding sensation of numbness. Nerve conduction study was suggestive of GBS, and lumbar puncture shows cytoprotein dissociation. He was managed with IV immunoglobulin and supportive management and drastic improvement was noted. The patient made an uneventful recovery with full muscle power.

Keywords

GBS, sinopharm vaccination

Introduction

GBS is an immune mediated polyneuropathy which presents as acute flaccid paralysis. Preceding infections are the predominant trigger of Guillain- Barré Syndrome (GBS). Epstein-Barr virus, Mycoplasma pneumonia, varicella-zoster virus (VZV), and covid 19 virus have also been related to GBS, though the associated clinical and electrophysiological variants are less well-defined. (1,2)

GBS is also known to be a sequalae following vaccination. Here, we report a case of 62-year-old immunocompetent male with GBS preceded by Sinopharm vaccination.

Case report

A 37-year-old male previously diagnosed patient with schizophrenia presented with difficulty in walking for 3 days duration. It was preceded by numbness of lower limbs. There was no objective sensory impairment. The upper limbs, bulbar and respiratory muscles were not involved. There were no prior history of diarrhoea or respiratory tract infection in the recent past. He had his 1st dose of Sinopharm vaccine 2 weeks before the onset of symptoms.

On examination, upper limb power was 5/5 MRC (medical research council) grading with lower limb power of 4-/5 and no respiratory muscle involvement. Deep tendon reflexes were absent globally and sensory examination was normal. A provisional diagnosis of GBS was made. Nerve conduction study (NCS) study was done which was suggestive GBS, and the cerebrospinal fluid examination showed cytoprotein dissociation, which confirmed our diagnosis of GBS.

His basic blood investigations were normal with a potassium of 4.0. His fasting blood sugar was normal and retroviral studies were negative. His serum CMV IgM antibodies were not detected but had CMV IgG antibodies. His mycoplasma antibodies were not positive. EBV IgM antibodies were negative. His CRP was normal. Patient was started on intravenous immunoglobulin (IVIg) and supportive treatment and the patient's condition improved in due course of time.

Discussion

Guillain-Barre Syndrome (GBS) is an autoimmune acute inflammatory polyneuropathy usually elicited by infection. Several studies reported GBS associated with Coronavirus Disease 2019 (COVID-19) infection. (2,3) The link between the COVID-19 vaccine and GBS is still not clearly established. As prevalence of GBS high among population there is a chance that it might be coincidental. (4) GBS following post COVID-19 vaccination has been reported notably following AstraZeneca vaccine and Pfizer-BioNTech vaccine. (5)

Patient clinical features were compatible with diagnosis of GBS i.e., weakness, paresthesias, and diminished or absent deep tendon reflexes. He had no preceding history of diarrhoeal or respiratory infecting and the viral screening was negative. We could not proceed with *Campylobacter jejuni* serology however the CRP was normal with negative blood cultures makes it least likely. In the absence of prior events and the fact he had his Sinopharm jab within 4 weeks of the

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symptom onset its arguable that vaccination as a trigger for GBS in this patient.

Conclusion

GBS following COVID vaccines are increasingly being reported especially following Astra Zeneca and pFizer vaccines. Though surveillance and further studies using robust study designs will be of benefit to see significance of the association we should keep in mind of the possible flaccid paralysis following vaccination.

Informed Consent

Informed consent was taken from the patient to disclose information in the case report.

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