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EC NEUROLOGY
Mini Case Study

Guillain Barre Syndrome Phenomena After COVID 19 Vaccination

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Introduction

The commonly reported neurological adverse effects following the administration of different types of COVID-19 are often mild and transient. However, vaccines can induce unexpected severe complications. We reviewed 37 published case reports across the world about the neurological complications following COVID-19 vaccination, explaining their presentations, findings, diagnosis and the patients prognosis. These complications include acute encephalitis, acute transverse myelitis, Gillian-Barre syndrome subtypes, cranial nerves neuropathies, myasthenia gravis and myositis, exacerbation of multiple sclerosis and development of refractory status epilepticus. We will focus in this article specifically on Guillain-Barré syndrome caused by the vaccines [1-5].

Results

Of the 37 case reports, 10 patients were diagnosed with one of the 4 subtypes of Guillain-Barre syndrome. The most commonly diagnosed was Acute Inflammatory Demyelinating Polyneuropathy (AIDP). 9 of these patients received the ChAdOx1 nCoV-19 vaccine and one got the mRNA (Pfizer) vaccine. All our reviewed cases were older than 40 years old. 7 patients were females and 3 were males. The patients presentations were in a time frame of 4 weeks within the administration of COVID-19 vaccine. Although some patients presented with non-specific symptoms as body aches, gait disturbance and back pain, the most common presentation was acute lower and/or upper limbs weakness. After the first symptom, almost all patients progressed within a median period of one week into more severe complications, including areflexic quadriplegia, respiratory failure and cranial nerves involvement.

These cases were diagnosed primarily with history, physical examination and MRI of the brain, spine (although it was negative in some patients), lumbar puncture (which shows albumin-cytologic dissociation), electromyography (EMG), and serum ganglioside antibodies detection shall be done. Although not all reports mentioned the management plan, for those who mentioned, mechanical ventilation was required for respiratory failure, and patients were mainly started on IV immunoglobulin 0.4 mg/kg for 5 days. Physiotherapy was required as well. Fortunately, all cases started to recover on the fifth day in varying degrees, from complete recovery to remaining bedbound requiring rehabilitation.

Conclusion

The earlier we diagnose Guillain-Barré syndrome, the better is the prognosis. And although COVID-19 vaccination induced-Guillain-Barré syndrome is severe and life threatening, it is a rare complication, and many patients recover, but within a varying period and degrees. Until now, there is no clear association between Guillain-Barré syndrome and COVID-19 vaccine.

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