

## Case Report

## Acute Onset Quadriparesis Post COVID 19 Vaccination: A Case Report

Bhawit Saraswat<sup>1\*</sup>, Sunil Kumar<sup>2</sup>, Divyant Rawal<sup>3</sup>, Sharat Johri<sup>4</sup>, Pankaj Kumar Rai<sup>5</sup>, Ankit Grover<sup>6</sup><sup>1</sup>Junior Resident, Department of General Medicine, Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly, Uttar Pradesh, India<sup>2</sup>Assistant Professor, Department of General Medicine, Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly, Uttar Pradesh, India<sup>3</sup>Associate Professor, Department of General Medicine, Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly, Uttar Pradesh, India<sup>4</sup>Professor, Department of General Medicine, Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly, Uttar Pradesh, India<sup>5</sup>Junior Resident, Department of General Medicine, Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly, Uttar Pradesh, India<sup>6</sup>Senior Resident, Department of General Medicine, Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly, Uttar Pradesh, India

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**Abstract:** Novel outbreak with coronavirus began in December 2019. Coronavirus can cause various system complications, and the most common being of respiratory system. In this report, we describe the symptoms of Guillain Barre Syndrome (GBS) after covid vaccination. We reported a 29 years old male patient with complaints of acute progressive ascending quadriparesis with respiratory failure 32 days after the covid vaccination. The patient reported these symptoms during first week after receiving his vaccination.

**Keywords:** Guillain-Barre syndrome (GBS), COVID-19 Vaccination, Quadriparesis, ICU, Respiratory failure, Neuropathy, Fever.

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## INTRODUCTION

In India free vaccination against COVID-19 started on January 16, 2021, and the government was urging all its citizens to get vaccinated. Out of eight COVID-19 vaccines four of them were developed in India and India's drug regulator has approved emergency use of Covishield (the name employed in India for the Oxford-AstraZeneca vaccine) and Covaxin, the home-grown vaccine produced by Bharat Biotech [1]. Commonly reported symptoms (occurrence in descending order) are soreness, fatigue, myalgia, headache, chills, fever, joint pain, nausea, muscle spasm, sweating, dizziness, flushing, feelings of relief, anorexia, localized swelling, decreased sleep quality, itching, tingling, diarrhoea, nasal stuffiness and palpitations [2]. GBS is a rare and fatal immune mediated disease of the peripheral nerves and nerve roots that is usually triggered by infections [3]. Most of patients have symptoms of an infection in the 3 weeks before the onset of weakness. One Japanese study found

that the most frequent antecedent symptoms were fever, cough, sore throat, nasal discharge, and diarrhoea[4].

The most frequently identified cause of infection is C jejuni. Other types of infection related to GBS are Mycoplasma pneumoniae, cytomegalovirus, Epstein-Barr virus, and Haemophilus influenzae [5-7].

## CASE PRESENTATION

One such case was reported of a 62 year old woman who presented with paraesthesia and progressive weakness of both lower limbs over 3 days. Clinical examination and investigation findings including lumbar puncture and nerve conduction studies were consistent with the diagnosis of GBS. She had no history of either diarrhoea or respiratory tract infections preceding her presentation. However, she had her first intramuscular dose of the Oxford/AstraZeneca COVID-19 vaccine 11 days prior to her presentation. Although no direct link could be ascertained[8].

In our case report, A 29-year old highly male with no chronic illness presented in the emergency department with fever, weakness in bilateral upper and lower limbs and difficulty in breathing. He had received his first dose of Covishield (the name employed in India for the Oxford-AstraZeneca vaccine) 32 days prior to presentation. The patient reported fever during first week after receiving his vaccination. However during third week, he developed tingling over whole body and alteration of oral sensation followed by vomiting and later to such an extent where he has difficulty in walking. Then patient faced difficulty in passing urine and sitting on his own, and few days later he developed difficulty in breathing for which he was given oxygen supplementation with IV immunoglobins and next day he was intubated and was kept on ventilator support, few days later was extubated and being referred to higher center for further management, and presented in emergency. His physical examination on presentation revealed normal higher mental function. He had an normal cranial nerve examination and no asymmetry of face was noted. Motor examination demonstrated normal bulk and decreased tone in bilateral Upper Limb and Lower Limb, strength in both upper limbs was noted to be 3/5 in both proximal and distal muscles, strength at his both hio flexors and Knee extensors was 0/5, while at both ankle joint was 1/5. Both plantars were absent and DTR (deep tendon reflexes) in all extremities was absent. His sensation to light touch was intact in all extremities. The patient was admitted to Neurology unit and routine investigations were done and conservative management was started. Routine labs revealed Hb- 14.10 TLC- 13300 PLATELET-1.40 L ESR-12 UREA-65 S.CREATININE-0.60 S.SODIUM-137 S.POTASSIUM -4.60 TOTAL BILIRUBIN-1.80 DIRECT BILLIRUBIN-0.50 INDIRECT BILIRUBIN-1.30 SGOT-80 SGPT-237 SAP-90 TOTAL PROTEIN-7.50 TOTAL PROTEIN-7.50 S.ALBUMIN-3.90 S.GLOBULIN-3.60 VIRAL MARKER-NON REACTIVE. A lumbar puncture was done and cerebrospinal fluid analysis showed albuminocytologic dissociation (micro protein 269 and total leucocyte of 5 all lymphocytes), consistent with diagnosis of GBS. Patient was febrile and was having high grade fever and conservative management with antibiotics was done. Later patient developed tracheal secretions for which patient was nebulized and physiotherapy was given, but patient secretions were still present, then patient was given CPAP support and was shifted to ICU but patient secretions were still present so patient was tracheostomized and was later discharged.

## DISCUSSION

Guillain-Barre syndrome (GBS) is a rare but serious post-infectious immune-mediated neuropathy. It results from the autoimmune destruction of nerves in the peripheral nervous system causing symptoms such

as numbness, tingling, and weakness that can progress to paralysis [9]. Diagnosis and management of GBS can be complicated as its clinical presentation and disease course are heterogeneous, and no international clinical guidelines are currently available [3]. Cases of Guillain-Barré syndrome have also been reported shortly after vaccination with Semple rabies vaccine and various types of influenza A virus vaccine [10].

## CONCLUSION

We report the case of COVID-19 post vaccine associated GBS, so it is important for the clinicians for early recognition of neurological complications and other side effects associated with COVID-19 vaccination. We would like to encourage COVID 19 vaccination despite its various side effects because the benefits of the vaccination outweigh any potential risks or side effects.

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