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Case Report

Guillain Barre Syndrome following Precautionary dose of vaccine against COVID 19: A rare occurrence

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ABSTRACT

SARS CoV2 first appeared in Wuhan, China in Dec 2019 and soon spread across the world at a rapid pace and was declared as Pandemic in March 2020.The spectrum of disease caused by COVID19 ranges from mild to severe illness with predominant respiratory symptoms and can progress to Acute Respiratory Distress Syndrome, Multiorgan failure and death. The present case is related to the occurrence of Guillain Barre Syndrome following the precautionary dose of vaccine against COVID 19.

Keywords: *COVID-19 vaccine, Guillain Barre Syndrome*

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INTRODUCTION

SARS CoV2 first appeared in Wuhan, China in Dec 2019 and soon spread across the world at a rapid pace and was declared as Pandemic in March 2020.The spectrum of disease caused by COVID19 ranges from mild to severe illness with predominant respiratory symptoms and can progress to Acute Respiratory Distress Syndrome, Multiorgan failure and death.[1]

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Vaccines came as a boon for the society in fight against COVID 19. In India, 2 vaccines have been approved for use in adults aged >18 years- Covishield (Oxford Astra Zeneca) and Covaxin.[2] Covaxin is an inactivated vaccine and it is India's first indigenously developed COVID 19 vaccine. Most common, Vaccine associated adverse events include Myalgias, fatigue, dizziness, fever, pain at the injection site and rarely anaphylactic shock.[3-5]

Guillain Barre Syndrome is a rare complication of Covid vaccine. Till date, the cases of GBS following COVID

vaccine are seen mostly after 1st or 2nd dose. Here, we present a rare case of GBS following the precautionary dose.

CASE REPORT

A 42 yr old male Non smoker, Non alcoholic, Non Diabetic, Non Hypertensive presented to emergency with complaints of tingling and numbness starting in Right lower limb followed by similar complaints in other limbs 3 days after getting precaution dose of COVAXIN. He also developed fever for 3 days post vaccination on 21/01/22. Later his symptoms progressed to B/L lower Limb weakness over the next 4-5 days. He had no history of either diarrhea, or respiratory tract infection preceding his presentation.

On physical examination, the patient's vitals were stable, afebrile, and normal oxygen saturation on room air with no signs of respiratory distress. Neurological Examination showed normal higher mental function, intact sensation in both upper and lower limb. Motor strength according to Medical Research Council grade was 1/5 in both upper and lower limb proximally and distally, normal bulk and decreased tone in B/L upper limb and lower limb. The patient was not able to walk or maintain sitting posture on his own. His deep tendon reflexes were absent in both upper and lower limb. No bowel and bladder incontinence was there. Examination of the cranial nerves and other systems were normal. His single breath count was 18. He also developed dysautonomia in form of persistent tachycardia. Routine investigations revealed Hb = 15.0 gm/dl, TLC = 15800/cumm, PLATELET COUNT= 338000/uL.

S.Urea= 61 Mg/Dl,
S.Creatinine=0.7 Mg/Dl,
S.Sodium=135 Mmol/L,
S.Potassium=4.5, Mmol/L
S.Total Bilirubin =0.8 Mg/Dl,
Direct Bilirubin= 0.2 Mg/Dl,
Indirect Bilirubin=0.6 Mg/Dl
Sgot=27 U/L, Sgpt=32 U/L,
S.Total Protein =7.00 Gm/Dl,
S.Albumin = 4.20 gm/dl,
HbSAg, Anti HCV, HIV = Non-Reactive

A lumbar puncture was done and cerebrospinal fluid analysis showed albuminocytological dissociation with CSF protein 74.7 & TLC of 5 cells with 100% lymphocytes consistent with diagnosis of GBS. Nerve conduction study of all four limbs was suggestive of motor axonal neuropathy. He received human intravenous immunoglobulin (IvIg) at a dose of 0.4 gm/kg/day for two days after which he showed signs of improvement clinically in form of improvement in single breath count and breath holding time. But he could not complete the dosage of IvIg due to financial reasons. When followed over next six weeks, patient also showed improvement in his power of all four limbs to 4/5.

DISCUSSION

GBS is an immune mediated disease[6] causing inflammatory polyradiculoneuropathy and ascending lower motor neuron weakness,[7] sensory symptoms and autonomic involvement. Rarely the illness can progress to respiratory involvement and need for mechanical ventilation. GBS has been seen post infections with campylobacter jejuni, cytomegalovirus, hepatitis E virus, mycoplasma pneumoniae, Epstein–Barr, and Zikavirus[8-10] or post vaccinations with influenza, rabies and meningococcal vaccine.[11] Sporadic cases of GBS have been seen post COVID vaccination as well.[12]

CONCLUSION

However, these occasional incidents should not hamper the spirit of mass vaccination campaign going on against COVID 19 as the benefits definitely outweigh the risks. But the clinicians should be aware of these rare adverse effects.

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