

# A Rare Presentation of Gullain Bare Syndrome Post Covid Vaccination [Covishield/Astrazenca]

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## Abstract

Vaccines against Covid virus have been discovered in the past two years since COVID-19 pandemic have emerged at the end of 2019 December Where the vaccines have been given and the vaccines are given fast track approval for the immediate administration to the population all over the country Majority of the vaccines like covishield which is also known as Astrazeneca which is developed by the Oxford university London.

**Keywords:** Gullian Barre Syndrome, Astrazeneca, Covishield, COVID-19 pandemic vaccines

## 1. Learning points

Rare complications after COVID-19 vaccinations that is gullain barre syndrome. Management of rare complications after Covid 19 vaccination

## 2. Introduction

(4) GBS is a very rare disorder which is of unknown cause. A Very few number of people developed GBS post Covid 19 vaccination. The COVISHIELD vaccine in INDIA it consist of the viral vector of the modified chimpanzee adenovirus Chad OX one with COVID-19spikes Present on the outer surface. The spike proteingenerates a host response against the SARS Covid 19. The COVID-19 vaccine has been approved by the government of India for the emergence and also by the world health organisation

### Case description

A 65-year-old female came to the Emergency opd with c/o of (4) weakness of all four limbs With normal bowel and bladder function. The patient was apparently normal before the vaccination of Covid 19 and after COVID-19 vaccination she developed fever of high grade For which she took medications Later on she developed headache and redness ,itching at the site of vaccination.The(2) next day she developed weakness in the both the lower limbs and then extending to the upper limbs this all happened on post Covid vaccination on day 12 She was unable to walk with her limbs. No history of loose motions, Nausea vomiting or constipation and no history Of cough and cold and no history of haemoptysis or heamestesis No history of Seizures, loss of consciousness ,trauma or ENT bleed.No History of decreased urine output or no signs of liver

failure and no signs of heart failure not a known case of hypertension or not a known case of diabetes mellitus or Bronchial asthma or TB or CKD or CAD

On /examination pt conscious, oriented, afebrile Pallor,icterus,cyanosis,clubbing,lymphedenopathya ndpedal edema absent

Pulse rate 90bpm,regularBp-120/90

CVS -s1s2+

Rs - bilateral air entry, NVBS

Per abdomen - soft non tender no organomegaly

Central nervous system pt was oriented to time placeperson.

No memory loss r slurring of speechNo sensory loss. Cerebellar function was normal.

Tone was normal in both upper limbs and lower limbsPower was 2/5 in both lower limbs and 3/5 in both upper limbs.

Deep tendon reflex's are absent on both upper limbs

Lab test	Results
Covid 19 rtPCR	Non reactive
Spike protein	36 .0(Au/ml)positive if >15.0

and lower limbs

Plantar reflex was mute on both legs Cerebral examination was normal

The patient was later shifted to Covid intensive care unit for further management and CT BRAIN was taken initially to rule out other causes and later MRI whole SPINE SCREENING Which was normal Covid 19 rtPCR was negative and Covid 19 Protiens (spike) neutralising antibodies were elevated

We conducted electromyography which showed moderate distal motor neuropathy in all four limbs

and nerve conduction study also done

Site	Latency (ms)	Duration ( ms)	Amplitude (mV)	Segment	NCV (m/s)
Median left					
Wrist	4.1	6.3	8.2	Wrist	–
Elbow	9.5	7.5	6.0	Wrist elbow	47.7
Median right					
Wrist	4.1	6.9	4.3	Wrist	
Elbow	8.0	6.8	4.2	Wrist elbow	54.3
Ulnar left					
Wrist	3.7	5.1	9.4	Wrist	
Elbow	8.6	5.3	10.3	Wrist elbow	54.4
Ulnar right					
Wrist	3.4	5.4	8.3	Wrist	
Elbow	8.5	5.5	6.2	Wrist elbow	46.5
Peroneal left					
Ankle	4.4	6.7	9.7	Ankle	
Popliteal	12.2	7.9	8.0	Ankle popliteal	43.8
Popliteal right					
Ankel	4.9	7.2	7.9	Ankle	
Head of fibula	13.1	7.3	5.4	Ankle head offibula	39.1
Tibial left					
Ankle	5.7	7.7	13.3	Ankle	

Site	Latency (ms)	Duration ( ms)	Amplitude (mV)	Segment	NCV (m/s)
Head of fibula	15.3	7.6	9.3	Ankle head offibula	36.3
Tibial right					
Ankle	5.3	7.1	10.1	Ankle	
Popliteal	15.3	8.3	7.2	Ankle popliteal	36.5

Later we started doing lumbar puncture on the pt under strict aseptic condition and sent for the csf analysis and meningitis profile. (1) CSF studies revealed increased protein level of 100 milligrams/dl and glucose of 110 mg /dl with normal wbc count, s/o the polyneuropathy was likely GULLIAN BARRE SYNDROME due to albuminocytological dissociation and the meningitis profile was Normal

### Treatment

Then she was started on IVIg for 5dys after explaining the complications and need for the rx and pt condition worsened due to type 2 respiratory failure then she was intubated and her power was decreasing day by day decreased to 1/5 both upper and lower limbs and one week later tracheostomy done and weaned her from the Ventilator and doesn't Require ventilator support

She is now under extensive physiotherapy and rehabilitation.

### 3. Discussion

GBS is a autoimmune condition that usually appears after the infection mostly due to campylobacter Jejuni, by immune system it produces antibodies that react with gangliosides at nerves this in turn causes nerve function damage and conduction blockade(6) And it also been reported after during 1976 swine flu outbreak found GBS after vaccination with 8.8 cases repeated per million recipients of influenza vaccination however there has been no relation between the Covishield vaccine and Guillain-Barre syndrome the Covid shield vaccine has viral vector of adeno virus of the chimpanzee

chAdox1 with Covid 19 spikes point on the outer surface it is given in two doses the usual doses in between 4 to 12 weeks the Covid shield vaccine trials have been conducted in India UK Brazil South Africa between April 2020 and December 2020 few cases have been reported describe the patients who have developed GBS within two weeks of vaccination studies shows in Kerala 10 people developed gbs post Covid vaccination .GBS is a heterogeneous condition, typically characterised by rapidly progressive, ascending, symmetrical paraesthesia and motor weakness associated with hyporeflexia or areflexia.

Cranial nerve deficits may also occur. Molecular mimicry, anti-ganglioside antibody production and complement activation have all been implicated in the pathogenesis of GBS. Back pain is also an important symptom that may be present before the onset of weakness and may sometimes mislead the clinician in the initial stages of diagnosis.

### 4. Conclusion

The COVID-19 pandemic has caused great trouble to the mankind And economy and huge loss of life has been seen in the second wave of Covid 19 across the world Later on the amazing clinical trials results for different vaccines And vaccination has been started across the world but only vaccines are the best way to prevent Corona virus and vaccine's does have some adverse effects including the very risk of developing GBS but the advantages of the vaccines are more than the risk . The study of GBS developing post vaccination may be required. This case report aims to highlight the importance for GBS and

immediate investigation and treatment when patient neuro symptoms after vaccination.

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## Ethical Consent

Patient included in the study had provided informed consent.

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## 5. Conflict Of Interest

The authors declare that was no conflict of interest.

## References

- Guillain G, Barré JA, Strohl A. Radiculoneuritis syndrome with hyperalbuminosis of cerebrospinal fluid without cellular reaction. Notes on clinical features and graphs of tendon reflexes. 1916. *Ann Med Interne (Paris)* 1999;150:24-32.
- Lu L, Xiong W, Mu J, Zhang Q, Zhang H, Zou L, et al. The potential neurological effect of the COVID-19 vaccines: A review. *Acta Neurol Scand* 2021;144:3-12.
- Razok A, Shams A, Almeer A, Zahid M. Post- COVID-19 vaccine Guillain-Barré syndrome; first reported case from Qatar. *Ann Med Surg (Lond)* 2021; 67: 102540.
- Kaur RJ, Dutta S, Bhardwaj P, Charan J, Dhingra S, Mitra P, et al. Adverse events reported from COVID-19 vaccine trials: A systematic review. *Indian Clin Biochem* 2021; 36: 1-13. doi: <https://doi.org/10.1007/s12291-021-00968-z>.
- Schonberger LB, Bregman DJ, Sullivan-Bolyai JZ, Keenlyside RA, Ziegler DW, Retalliau HF, et al. Guillain-Barre syndrome following vaccination in the National Influenza Immunization Program United States, 1976-1977. *Am J Epidemiol* 1979; 110: 105-23. †
- Van den Berg B, Walgaard C, Drenthen J, et al. Guillain-Barré syndrome: pathogenesis, diagnosis, treatment and prognosis. *Nat Rev Neurol* 2014;10:469-82. doi:10.1038/nrneurol.2014.121 pmid:<http://www.ncbi.nlm.nih.gov/pubmed/25023340> CrossRefPubMed