



## A CASE OF GUILLIAN-BARE SYNDROME FOLLOWING PRIMARY INFECTION WITH VARICELLA ZOSTER

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### KEYWORDS :

#### INTRODUCTION:

Chicken pox is a viral infection affecting mainly children and presents with exanthematous rash with fever. The virus, after the primary infection, can remain latent in the spinal and cranial ganglia and may be reactivated at a later stage in a state of immune compromise to present as herpes zoster. Neurological complications following primary chicken pox infection are extremely rare (0.01-0.03%), although some neurologic complications are known and GBS is one such rare complication. The cause of GBS has been postulated as either direct viral invasion or through an immune-mediated allergic mechanism.

We here present a case report of a 26 year old male suffering from GBS post varicella infection.

#### CASE REPORT:

A 26 year old male patient who had chicken pox 1 month back, presented with weakness of both lower limbs which is progressed over 3 days to both upper limbs along with paresthesias, with no bowel and bladder dysfunction. General physical examination revealed chicken pox lesions in crusting stage on trunk and face, patient was well oriented to time, place and person, co-operative, afebrile, normotensive with normal respiratory pattern (Pulse rate-82/min, BP-110/70 mm of Hg, SpO<sub>2</sub> -99% on room air with respiratory rate-18/min). Single breath count (SBC) was 30 and chest expansion was 5cm. Neurological examination-On motor system examination there was normal bulk with hypotonia in all four limbs, power 1/5 in both lower limbs and upper limbs. Deep tendon reflexes were absent and sensory examination was normal.



**Fig-1: Shows healing varicella skin lesions with crusting on face**

- INVESTIGATIONS-** CBC was in normal limit, Liver function test, Renal function test, Serum electrolytes were normal, MRI of brain normal, CSF analysis; glucose-69mg/dl, proteins-226mg/dl, volume 0.5ml, colour-colourless, total cell count -2 cells/microliter, NCS report -suggestive of sensory motor demyelinating radiculoneuropathy. Patient was started on intravenous immunoglobulin (IVIG) and supportive treatment and the patient's condition improved in due course of time.

NCS FINDINGS :	REPORT :
NCS of bilateral median, ulnar, peroneal and tibial nerves was done.	
Decreased CMAP amplitudes, motor conduction velocities and prolonged distal latency in bilateral median nerves, left ulnar nerve, bilateral peroneal nerves and tibial nerves.	
Normal CMAP amplitudes, decreased motor conduction velocities and prolonged distal latency in right ulnar nerve.	
Absent SNAPs in bilateral median ulnar and tibial nerves.	
F-waves are prolonged in bilateral peroneal and tibial nerves.	
<b>IMPRESSION:</b>	
NERVE CONDUCTION STUDY SUGGESTIVE OF SENSORY/MOTOR DEMYELINATING RADICULO NEUROPATHY IN BOTH UPPER AND LOWER LIMBS TO CORRELATE CLINICALLY.	

TEST NAME	RESULT	BIOLOGICAL REFERENCE RANGE
<b>Physical Examination</b>		
Volume	0.5 ml	---
Colour	Colourless	Colourless
Clarity	Clear	Clear
Clot	Absent	Absent
<b>Microscopic Examination</b>		
Total Cell Count	2 cells/ml	Adults: 0-5 cells/ml Newborn: 0-20 cells/ml
<b>Differential Cell Count</b>		
Lymphocytes	100%	
Microscopic Findings	Absent: RBCs, WBCs, Gram Stain, Bacteriuria, Fungal Infection	
<b>Chemistry of Serum/Plasma</b>		
Type of cells	Adults	Neonates
Lymphocytes	26% - 46%	15% - 38%
Mononuclear Cells and Monocytes	16% - 26%	12% - 26%
Neutrophils	0 - 7%	0 - 6%
Basophils	0 - 1%	0 - 1%
Eosinophils	0 - 4%	0 - 4%

TEST NAME	RESULT	BIOLOGICAL REFERENCE INTERVALS
Glucose Method: GOD-POD	69 mg/dL	45 - 80 mg/dL
Protein Method: Protein Assay	226 mg/dL	15 - 45 mg/dL

#### DISCUSSION:

This patient has all the significant clinical features found in GBS i.e. weakness, paresthesias, and diminished or absent deep tendon reflexes.

The VZV, is a rare antecedent for GBS and various cases with various pathogenic mechanisms have been reported since antiquity.

Varicella zoster is associated with rare but dreaded neurological complications. Varicella is easy to diagnose with typical rash and pain and it should be treated with antiviral immediately so as to prevent or reduce such complications.

Furthermore the immune compromised or at high risk patients may be immunized. GBS following herpes zoster typically has a latent period of two weeks to two months. Shorter latent periods, as in this case, are associated with more severe illness.

#### CONCLUSION:

Guillain bare syndrome is a rare neurological complications associated with primary VZV infection. The current case report highlights the importance of clinical examination and clinical suspicion of this rare entity for proper diagnosis and timely intervention which can help prevent associated morbidity and mortality and lead to better outcome.

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