



## Role of Intravenous Immunoglobulin in Childhood Guillain –Barre Syndrome

### KEYWORDS

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**ABSTRACT** *The aim of the study was to evaluate clinical outcome, effectiveness, ventilator support and duration of hospital stay after treatment with IVIG in childhood guillain-barre syndrome*

### INTRODUCTION

Guillain-barre syndrome is autoimmune disease of peripheral nervous system causing progressive weakness and areflexia. It is a major cause of acute neuromuscular paralysis and causes respiratory failure requiring ventilator support.

The most frequent subtype is Acute inflammatory demyelinating polyradiculopathy(AIDP) accounts for 90% and other variants of GBS like acute motor Axonopathy (AMAN) and acute motor sensory Axonopathy account for 30%.

Present study is to evaluate clinical feature and outcome of patients with GBS Subtypes who receive IVIG, which is expensive, easier to administer and safer in patients with autonomic disturbance.

### CASE REPORT

A 12 year old male child resident of Radhanagri Kolhapur district Maharashtra presented with complaints of weakness in all four limbs one day before to admission. Child was apparently normal four days back, who developed flu like symptoms, fever, headache and generalized weakness and was taken medication and relieved. One day before to admission he developed weakness in lower limbs, which is acute in onset and progressed gradually to involve upper limbs which was noticed by parents in early morning, also noticed child was not able to sit and stand from lying position, and complete loss of power in all four limbs. Then patient taken to D.Y. PATIL HOSPITAL, KOLHAPUR for further management. On admission –pt is conscious, oriented, alert with good memory but his speech is altered.

On examination – all cranial nerves functioning, pupils reacting. Sensations like touch, pressure, deep pain were lost. Superficial reflexes were present. Deep tendon reflexes were absent (areflexia), hypotonia in both upper and lower limbs with complete loss of power (grade -0). Bowel, bladder was not involved, no cerebellar signs, no meningeal signs. Treatment started with I.V. fluids, on bed rest, kept nil per oral with RT in-situ. Investigation sent for Complete hemogram, liver function test, prothrombin time, renal function test, serum electrolytes, ABG was in normal limits. CSF Examination was done which showed elevated level of proteins with normal level of sugar, mononuclear cells and

polymorphs present.

As patient was developed respiratory distress shifted on to mechanical ventilation and first dose of IVIG is administered @ (1mg/kg) for two days. Patient continued on ventilator support for next six days after which his breathing pattern was improved and extubated shifted to oxygen support by nasal prongs and started with feed through RT. After 4 days of extubation patient developed respiratory distress with irregular breathing pattern and was shifted on to mechanical ventilation.

Second dose of IVIG administered for next two days and continued ventilator support for next 6 days, and after noticed improvement in respiration, patient extubated and shifted to oxygen by nasal prongs for next 10 days, child was gradually improved started with soft diet. Patient was hemodynamically stable and was improved with his speech, tone, power and movements. After 28 days of admission patient advised with physiotherapy which was helped in his improvement of posture and gait.



**ON VENTILATOR SUPPORT**



#### ON PHYSIOTHERAPY

#### DISCUSSION

Guillain-barre syndrome is an autoimmune disease postulated to be caused by mechanism of molecular mimicry after an infection where in CSF it shows protein level elevated and role of IVIG in GBS for improvement of muscle strength and ventilator is helpful in respiratory support in children

#### CONCLUSION

Guillain-barre syndrome in Children represents acute flacid paralysis. Cerebro- spinal fluid analysis is important to confirm the diagnosis .IVIG is safe and effective treatment .if initiated early it reduces the severity of the disease .In addition duration of disease ,ventilation requirement hospital stay, disability ,and mortality are also reduced .acute relapse following initial recovery with IVIG sometimes occur and needs to be picked up early. The relapses respond to additional doses of IVIG.