

Case Report

Guillain–Barre Syndrome (GBS) in a 2 Month Old Infant: A Case ReportDr Shantisena Mishra¹, Dr Dipankar Mondal², Dr Jatadhari Mahar³, Dr Arun Gunasekar², Dr Samrita Seth²¹Associate Professor, ²Junior Resident, ³Senior Resident

Department of Pediatrics SVPPGIP and SCB Medical College and Hospital, Cuttack

***Corresponding author**

Dr Dipankar Mondal

Email: mondaldipankar@rediffmail.com

Abstract: Guillain–Barre syndrome (GBS) is an acute immune mediated progressive predominantly motor symmetric polyradiculoneuropathy. Although GBS can occur at any age it is very rare in infancy. Very few cases of have been reported under 12months of age. We report a case of GBS in a 2 month 10 days old male baby.

Keywords: Gullain Barre Syndrome, Polyradiculoneuropathy

INTRODUCTION:

Guillain–Barre syndrome (GBS) is an acute immune mediated peripheral polyneuropathy mostly characterized by progressive, symmetric weakness, paresthasias and areflexia/hyporeflexia combination. Although GBS is the most common cause of acute flaccid paralysis in children, it is rare under the age of 2 years and so far, only few cases have been reported under the age of 12 months [1, 2].

CASE REPORT:

A 2 month 10 days old male child presented with loose stool for 7 days and weakness of both lower limbs for 2 days. There was no history of trauma, fever, vomiting, convulsion and recent vaccination. There was no history of urinary retention. The child was singleton, term, adequate for gestational age and born out of LSCS (Indication: Gestational diabetes) with no history of birth asphyxia. Antenatal history was uneventful. Examination revealed HR: 120/minute, RR: 42/minute, peripheral and central pulses were well felt and CRT was less than 3 seconds. Neurological examination revealed hypotonia, areflexia and absence of power in both lower limbs. The Head circumference was appropriate for age and there was no evidence of any neurocutaneous marker. Investigation revealed Hemoglobin: 10.0 gm/dl, Total leucocyte count: 6000 /cmm with Neutrophil: 42%, Lymphocyte: 53%, Eosinophil: 03%, Monocyte: 02% and Basophil: 00%, Total platelet count: 2.8 lakhs/cmm, Serum Sodium: 132.96 meq/L, Potassium: 4.09 meq/L, Calcium: 1.08

meq/L. CSF study performed after 1st week and revealed 3 lymphocytes with protein: 151.77 mg/dl and sugar 55.9 mg/dl. NCV study was within normal limits in both upper limbs but in both lower limbs proximal latency was increased and CMAP and conduction velocity in bilateral tibial nerve and common peroneal nerves were decreased and F wave was also absent, suggestive of grossly axonal and demyelinating type of motor polyneuropathy. MRI of spine was normal. Stool for polio virus was negative. Child was given two doses of intravenous immunoglobulin at 1 g/kg/day. The child was discharged home and regularly followed up. There was a gradual improvement in power in next 4 weeks.



Fig 1: Showing a 2 month old infant with GBS

DISCUSSION:

GBS is an autoimmune disorder often considered a post-infectious polyneuropathy involving mainly motor but also sensory and sometimes autonomic nerves [3, 4]. The paralysis usually follows a non specific gastrointestinal (especially *Campylobacter jejuni*, but also *Helicobacter pylori*) or respiratory (especially *Mycoplasma pneumoniae*) infection by approximately 10 days [4, 5]. GBS is also reported following administration of vaccines against rabies, influenza and OPV [6]. The classical presentation is characterized by an acute monophasic, nonfebrile, postinfectious illness manifesting as ascending weakness, and areflexia. Sensory, autonomic, and brainstem abnormalities may also be seen [7]. In our case GBS was suspected by clinical presentation but age of the patient caused diagnostic dilemma. The diagnosis was confirmed by CSF study which showed albuminocytological dissociation and suggestive NCV findings. Differential diagnosis was spinal cord lesions like poliomyelitis, other causes of peripheral neuropathies like toxic and metabolic causes, congenital myopathies and neuromuscular junction disorders like myasthenia gravis, tick paralysis and infantile botulism [8]. They were excluded by history, physical examination and laboratory investigations.

CONCLUSION:

Though GBS can occur at any age, GBS in infancy is rare and very few cases have been reported in less than 6 months. The possibility of GBS should keep in mind while dealing with infants with acute flaccid paralysis so that early diagnosis with prompt treatment can significantly improve the outcome.

Conflict of interest: none

REFERENCES:

1. Winner SJ, Evans JG. Age-specific incidence of Guillain-Barré syndrome in Oxford shire. *QJM*. 1990 Dec 1; 77(3):1297-304.
2. Vasconcelos A, Abecasis F, Monteiro R, Camilo C, Vieira M, de Carvalho M, Correia M. A 3-month-old baby with H1N1 and Guillain-Barré syndrome. *BMJ case reports*. 2012 Mar 27; 2012: bcr1220115462.
3. Gulati S. Neuromuscular disorders. Paul VK, Bagga A. Ghai Essential Paediatrics, 8th edition, CBS Publishers, 2013: 590-592.
4. Sarnat BH. Guillain-Barre Syndrome. Kliegman, Stanton, St Geme, Schor. Nelson Text Book of Pediatrics. 20th edition. International Edition. Elsevier, 2016: 3010-3013.
5. Agrawal S, Peake D, Whitehouse WP. Management of children with Guillain-Barre syndrome. *Archives of disease in childhood-Education & practice* edition. 2007 Dec 1; 92(6):161-8.

6. Feng WK, Hung KL, Liu CH. Guillain-Barré Syndrome in a Three-Month.. 2010 Mar 1; 8(1):57-61.
7. Kuwabara S. Guillain-barré syndrome. *Drugs*. 2004 Jan 1; 64(6):597-610.
8. Kishore P, Sharma PK, Saikia B, Khilnani P et al. Guillain-Barre syndrome masquerading as acute respiratory failure in an infant. *J Pediatr Neurosci*. 2015 Oct-Dec; 10(4): 399-400.