International Journal of Contemporary Pediatrics
Sreekantham SS et al. Int J Contemp Pediatr. 2022 Dec;9(12):1156-1158
http://www.ijpediatrics.com
pISSN 2349-3283 | eISSN 2349-3291

DOI: https://dx.doi.org/10.18203/2349-3291.ijcp20223060

Original Research Article

Clinical profile and outcome of Guillain Barre syndrome in a tertiary care hospital

Sravya Sree Sreekantham*, Sudha Rudrappa, Thanuja Basauanagowsa

Department of Pediatrics, MMC and RI, Mysore, Karnataka, India

Received: 05 July 2022
Revised: 07 November 2022
Accepted: 11 November 2022

***Correspondence:**
Dr. Sravya Sree Sreekantham,
E-mail: sreekanthamsravyasree@gmail.com

ABSTRACT

Background: Guillain Barre syndrome (GBS) is a progressive symmetric muscular weakness with absent or depressed deep tendon reflexes. Wide spectrum of disease severity can be seen ranging from a mild disease to quadriparesis, cranial nerve involvement and autonomic instability.
Methods: Hospital based observational study is planned for GBS patients admitted to Cheluvamba hospital, a tertiary care hospital in South India, for a period of 2.5 years from Jan 2020 to August 2022.
Results: 30 patients (12 males; 18 females; mean age of 7.7 years) were enrolled in this study. Among which 11 were in age group of 0-5 (36%), 10 were in the age group of 6-10 (33%), 7 were in age group of 10-15 (23%), 2 were in age group 16 and above (6.6%). Type of paralysis was paraparesis in 14 (46%) children quadriparesis in 15 (50%) children and one child had no limb involvement. In associated dysfunctions, autonomic dysfunction was seen in 1 (4.5%), bulbar palsy in 3 (13.6%). One child presented with features of Miller Fischer variant of GBS which are ophthalmoplegia and ataxia. Among 30 children 22 were recovered and discharged, 3 children died, and 5 children left against medical advice.
Conclusions: The clinical characteristics, subtype of GBS, and outcome vary according to geographic area. This study is directed to find the clinical pattern and outcome of the same in tertiary care hospital in south India.

Keywords: Intravenous immunoglobulin, Plasmapheresis, Acute flaccid paralysis

INTRODUCTION

Guillain Barre syndrome (GBS) is a progressive symmetric muscular weakness with absent or depressed deep tendon reflexes.[9] Wide spectrum of disease severity can be seen ranging from a mild disease to quadriparesis, cranial nerve involvement and autonomic instability.[6] In spite of better detection and treatment modalities, it can be a life-threatening disease. It remains to be an important disease reported as acute flaccid paralysis. Despite this, there is scarcity of data from developing countries regarding the clinical profile as well as outcomes of patients with GBS. Hence, the present study is planned.

Aims and objectives

The aim and objectives of the study were to study the clinical profile and outcome of GBS in tertiary care hospital in Mysore.

METHODS

Study design and population

Hospital based observational study is planned for GBS patients (based on clinical features, nerve conduction study and CSF analysis) admitted to Cheluvamba hospital, a tertiary care hospital in South India, for a

period of 2.5 years from Jan 2017 to August 2022. Ethical committee approval was taken

Sample size of 30 cases. All chidren admitted with features of acute flaccid paralysis were evaluated for GBS, investigations like nerve conduction studies, CSF analysis were done. Children who require IVIG and supportive ventilation were treated in ICU and followed up till discharge. Data collected is entered in MS excel 2010 and analysed using SPSS version 25. Descriptive statistical measures like percentage, mean and standard deviation will be applied. Data is analysed and conclusions are drawn.

Inclusion criteria

All patients below 18 years of age with GBS admitted to our hospital.

Exclusion criteria

Patients who have received plasmapheresis or IVIG (Intravenous immunoglobulin) before hospitalization were excluded.

RESULTS

The 30 patients (12 males; 18 females; mean age of 7.7 years) were enrolled in this study. Among which 11 were in age group of 0-5 (36%), 10 were in the age group of 6-10 (33%), 7 were in age group of 10-15 (23%), 2 were in age group 16 and above (6.6%).

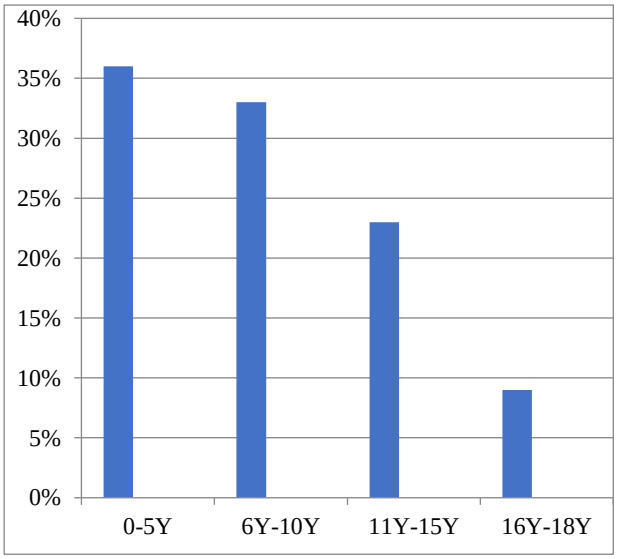

Figure 1: Age group distribution.

Antecedent infection was present in 12 (40%). Type of paralysis was paraparesis in 14 (46%) children quadriparesis in 15 (50%) children and one child had no limb involvement. In associated dysfunctions, autonomic dysfunction was seen in 1 (4.5%), bulbar palsy in 3 (13.6%). One child presented with features of Miller Fischer variant of GBS which are ophthalmoplegia and ataxia. Among 30 cases 20 were of AIDP, 8 are of AMAN, 2 are of ASMAN variety. All 22 children got CSF analysis done in which except 2 children 28 children showed albumino cytological dissociation. All 30 children received IVIG. Among 30 children 22 were recovered and discharged, 3children died, and 5 children left against medical advice.

Table 1: Clinical profile.

Variables	Percentages (%)
Gender	
Male	40
Female	60
Ascending paralysis	95
Sensory disturbance	4.5
Respiratory failure	10
Autonomic dysfunction	4.5
Bladder involvement	0
Cranial nerve involvement	13.6
Type of paralysis	
Paraparesis	46.6
Quadriparesis	50
No limb involvement	3.3
Antecedent illness	
Yes	40
No	60
CSF studies	
Albuminocytological dissociation:	93.3
Normal:	6.7
Nerve conduction study	
AIDP	66
AMAN	30
ASMAN	3.3
Outcome	
Recovered and discharged:	73.3
Death:	10
DAMA	16.6

CSF: cerebrospinal fluid, AIDP: Acute inflammatory demylinating polyradiculoneuropathy. AMAN: Acute motor axonal neuropathy; ASMAN: Acute sensory motor axonal neuropathy; DAMA: Discharged against medical advice.

DISCUSSION

In our series, female patients were outnumbered male, this is consistent with previous studies done in Mumbai ,Nagpur and Iran.[1,4,6] Most commonly affected age group is 0-5 years which is consistent with studies done in Iran and against the other studies.[2,4] Most common symptom is motor in the form of ascending paralysis which is similar to other studies.[1,2,5,6,9] Antecedent illness is seen in 40% of cases among which URTI, is most common illness which is similar to other studies.[5,10] Among the type of NCS AIDP is most common variety which is similar to other study done in Nagpur. All 30 children were undergone CSF analysis which showed

albuminocytological dissociation in 96% of cases which was not consistent with other studies done in Iran in which only 2 children showed albuminocytological dissociation.[6] In outcome 73.3% children were discharged and mortality was 10% which is similar to other study done in Nagpur, few other studies showed mortality as high as 16.6% in New Delhi, as low as 6.6%in Mumbai.[1,2,7] There is a single case of Miller Fischer variant of GBS in our study which was also reported in other studie.[8] Among 30 cases there is a recurrent case of GBS following COVID-19 vaccination who had gap of 4 years in between 2 episodes. According to definition of recurrent GBS the time gap between 2 episodes is 2 months if there is full recovery or 4 months if there is partial recovery. The length of hospital stay is ranging from 1-26 days longest duration included PICU stay and mechanical ventilation, few studies done in Mumbai showed hospital stay as long as 60 days.[1] The limitation of our study was small sample size, and failure to track outcome of children left against medical advice.

CONCLUSION

The clinical characteristics, subtype of GBS, and outcome vary according to geographic area.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Rangan RS, Tullu MS, Deshmukh CT, Mondkar SA, Agrawal M. Clinical Profile and Outcome of Guillain-Barre Syndrome in Pediatric Patients Admitted to a Tertiary Care Centre: A Retrospective Study. Neurol India. 2021;69(1):81-4.
2. Meshram RM, Bokade CM, Merchant S, Abhisheik S, Agrawal H, Dhakne S. Clinical profile of childhood Guillain-Barre Syndrome. Int J Pediatr Res. 2016;3(6):427-32.
3. Khairani AF, Karina M, Siswanti LH, Dewi MM. Clinical Profile of Pediatric Guillain-Barré Syndrome: A study from National Referral Hospital in West Java, Indonesia. Biomed Pharmacol J. 2019;12(4).
4. Momen AA, Shakurnia A. The Epidemiology of Guillain-Barré Syndrome in Children under 15 Years Old in Southwest Iran. Biomed Hub. 2017;2:1-8.
5. Bhagat SK, Sidhant S, Bhatta M, Ghimire A, Shah B. Clinical Profile, Functional Outcome, and Mortality of Guillain-Barre Syndrome: A Five-Year Tertiary Care Experience from Nepal. Neurol Res Int. 2019;2019:3867946.
6. Salehiomran MR, Nikkhah A, Mahdavi M. Prognosis of Guillain-Barré Syndrome in Children. Iran J Child Neurol. 2016;10(2):38-41.
7. Sonali S, Nitin G, Arpita GM, Anurag C, Sneha W, Pallavi S. Clinical profile and predictors for outcome in children presenting with Guillain-Barré syndrome. J Family Med Primary Care. 2020;9(10):5316-9.
8. Kollár K, Liptai Z, Rosdy B, Móser J. Guillain-Barré-szindróma gyermekkorban [Guillain-Barré syndrome in childhood]. Ideggyogy Sz. 2009;62(11-12):399-404.
9. Koul R, Al-Futaisi A, Chacko A, Fazalullah M, Nabhani SA, Al-Awaidy S et al. Clinical characteristics of childhood Guillain-Barre syndrome. Oman Med J. 2008;23(3):158-61.
10. Roodbol J, De Wit MY, Van den Berg B, Kahlmann V, Drenthen J, Catsman-Berrevoets CE et al. Diagnosis of Guillain-Barré syndrome in children and validation of the Brighton criteria. J Neurol. 2017;264(5):856-61.

Cite this article as: Sreekantham SS, Rudrappa S, Basauanagowsa T. Clinical profile and outcome of Guillain Barre syndrome in a tertiary care hospital. Int J Contemp Pediatr 2022;9:1156-8.