Original Article

Gullein Barri Syndrome (GBS), the Leading Cause of Acute Flaccid Paralysis at Peoples Medical College Hospital Nawabshah

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ABSTRACT

Objective: To identify and treat the acute flaccid paralysis in interior of Sindh reported at PMCH Nawabshah.
Design: Retrospective, with proper date and record.
Place and Duration of Study: Medicine and ICU Department at Peoples Medical College Hospital Nawabshah from 31st January to 31st October 2009. Patients of all 3 medical units were involved in the study during this period.
Patients and Methods: 50 patients with acute flaccid paralysis (AFP) were admitted in Intensive Care Unit of Peoples medical college Hospital Nawabshshah with support of all emergency measures and were evaluated.
Results: 50 patients presented with AFP during study period. 40 were males and 10 were females. GBS was the leading cause of AFP. Majority of the patients were young, out come was excellent. 2 patients died due to respiratory failure.
Conclusion: GBS is the leading cause of AFP in adults in interior of the Sindh while facilities for treatment are limited, which need to be extended in the hospitals situated in interior of Pakistan i.e. ICU and plasmopharesis.

INTRODUCTION

Guillain-Barré syndrome (GBS) is an eponym for a heterogeneous group of immune-mediated peripheral neuropathies [1,2] that occurs in previously healthy individuals within 1 to 4 weeks after respiratory tract infection [3] or diarrhea but can follow surgery [5] or immunization [6]. It is a well known disorder especially in young persons, pathologically there is demyelination of spinal roots and peripheral nerves.It is neuropathy characterized by a rapidly progressive weakness with or without sensory disturbance, in at least 2 legs and absent lower tendon reflexes [7]. Though sometimes sensory complaints and vasomotor crisis are also noticed in the patients. In most of the patients disability remains localized to lower limbs and eliminate spontaneously but disability may convert in crisis. CSF examination mostly shows an increased protein level but no increased number of cells [8]. Other causes of rapid progressive weakness need to be excluded e.g. poliomyelitis, transverse myelitis, hypokalamia. Incidence of GBS is 1.18 in 1000 per year and increases with age [9] .

In Pakistan no system is established to record its incidence and prevention. Most patients have an infection within 3 weeks period prior to onset of weakness e.g. upper respiratory tract infection, infective diarrhea. Despite treatment about 20% of patients are unable to walk, 6 months after onset of the disease. The risk of developing chronic GBS or to have 2nd bout of GBS is very low. Death occurs due to respiratory failure as consequences of ascending paralysis involving diaphragms [10].

PATIENTS & METHODS

This retrospective study was carried out in ICU , department of medicine at Peoples Medical College Hospital Nawabshah, from June 2008 to 31st December 2009. 50 patients with acute flaccid paralysis were included in this study, having no previous history of any major illness. All patients were kept in ICU.

Diagnosis was based on physical examination with decrease in power, tone in lower limbs, arreflexia in lower limbs and CSF findings of absolutely raised proteins. Poliomyelitis was excluded by stool test. Limited lab investigations were carried out. Neuro imaging (computed tomography) and electro neuro physiological studies were carried out in certain cases.

After establishing the diagnosis, clinically stable patients were sent to home but those who were critically ill, were retained in ICU till recovery. All the patients were/ are in follow up.

Results were prepared with help of tables and graphs. Data was analyzed through SPSS software.

RESULTS

The 50 cases of acute flaccid paralysis were admitted. 10(20 %) were female and 40(80 %) male (Table-1). Male: female ratio is 4:1. There was wide variation of

age ranging from a minimum of 15 year to 40 year with mean age was 23 years (Table 2).

Majority of the 48(96%) cases were suffering from GBS while 2 (4%) cases were confirmed as poliomyelitis. Out of 48 cases of GBS 38 were males and 10 were females. Most of the patients were reported from rural areas of Nawabshah and periphery (Table 3).10 patients were stable and were discharged after 3 days while 2 patients were critically ill at presentation, respiratory distress and died inspite of institution of plasmopharesis and mechanical ventilation. 36 patients were clinically unstable neurologically with poor cardiopulmonary status. They were kept in ICU for period till they were recovered. All the patients with GBS made recovery and 2 (4.15) cases were expired.

Table 1: Gender Distribution Of AFP

Sex	GB	Others
Male	38	2
Female	10	2

Table 2: Distribution According to Age

Age in years	Number of patients	%age
15-20	20	40%
21-25	10	20%
26-30	9	18%
31-35	7	14%
36-40	4	8%

Table 3: Distribution According to Areas

Districts	Number of patients	%age
Nawabshah	33	66%
Noshehro feroz	9	18%
Sanghar	4	8%
Khairpur	2	4%
Dadu	2	4%

Table 4: Distribution of GBs Cases According to Outcome In G.B Syndrome 48 Patients.

Clinically stable	Clinically unstable	Expired
10	36	2

DISCUSSION

AFP is the condition of diverse etiology; it needs proper evaluation at presentation to ensure the delivery of effective and timely management, otherwise it may prove fatal.

GBS is one of the important causes of AFP. This has been high lightened by previous studies, this is an acute demylinating polyradiculopathy believed to be caused by immune mediated process with a mortality rate of 4 to 5 % [11].

In our study clinical feature was rapidly progressive muscle weakness often ascending from lower to upper limbs and more markedly proximal than distally. Distal paraesthesia and limb pain often proceed the weakness. Facial and bulbar weakness requiring ventilatory support occurs in 20% of cases. In most patients muscle weakness progress from 1 to 3 weeks but rapid deterioration with respiratory failure can develop within hours. Diffuse weakness with widespread loss of reflexes are most striking findings [10].

In our study approximately 80% patients recover spontaneously, while 20% need hospitalization. Prevalence of GBS has been reported to vary from place to place. A study conducted at Ayoub Medical College Abbotabad from January 2003 to December 2004 by Dr. Anis.ur.rehman and colleagues, showed predominance of GBS in females about 55% of the patients, while prevalence of GBS among AFP in Northern areas is 42.8 % [12].

A study conducted in Hong Kong during 1997 to 2002 reported a prevalence rate of 2 to 45% , Oman is 45% and 47 % from Australia among AFP. In Mexico 63% prevalence was during 1988 to 1991[13].

A study conducted over 11 years period on 546 patients at Department of pediatrics neurology hospital Honduras Central America, GBS was found in 72.2 % patients with annual incidence of 1-37/100,000 and more common in males [14].

Almost similar results are of Hazara study while in Bahawalpur Victoria Hospital Dr. Mazhar and colleagues conducted a study in 1998 with almost male dominant patients[15].

In our study the males are dominant as seen in studies of different centers of the world. Emergency handling and care of the patients is mandatory with early management done in ICU with use of mechanical ventilation and plasmopharesis, the results are excellent. I/V immunoglobulin are also very effective but very expensive about Rs. 100,000 per day, so it is not practical while efficacy is same as plasmopharesis.

CONCLUSION

We recommend that every patient of AFP should be dealt properly and preferably in ICU. Mechanical ventilation + plasmopharesis / I/V immunoglobulin are mandatory when a patient develops respiratory distress.

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