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GUILLAIN-BARRE SYNDROME: A CASE REPORT

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ABSTRACT

Introduction: Guillain Barre Syndrome is a neurological disorder that manifests as a severe fulminant polyradiculoneuropathy. It is considered to be major cause of acute and subacute paralysis. The condition is characterized by weakness and tingling. Muscle stretch reflexes are diminished or nonexistent, and sensory loss is frequent. Although the aetiology is still unknown, demyelination of spinal nerve roots is a pathology. The death is unusual. Given that some patients may experience potential ventilatory failure and cardiovascular instability, early diagnosis and urgent referral are recommended in severe situations. **Case presentation**: A 12 years old boy was taken to the hospital with chief complaints of Weakness in bilateral upper and lower limbs, fever spikes, breathing difficulty. On physical examination, the patient has experienced weakness in bilateral upper and lower limbs, In "Cardiovascular System, S1 and S2 sound are present, In Respiratory System, Air entry is bilaterally equal, tone and power of upper and lower limbs are decrease, then treatment was started, but symptoms were not improving hence started IVIG. **Conclusion**: In this study, we primarily focus on professional management and outstanding nursing care which helps to improve symptoms and also the crucial role of IVIG as a treatment option.

KEYWORDS: Guillain Barre syndrome, weakness, IVIG.

INTRODUCTION

Guillain-Barre syndrome (GBS) is a complicated rare degenerative neurological disorder, in which the immune system is mistakenly attacks the portions of peripheral nervous system which can be acute or chronic in nature. The most common cause of acute or subacute generalised paralysis is Guillain-Barre syndrome, which was once second only to polio in terms of prevalence. The estimated yearly incidence per 100,000 people is between 0.6 and 2.4. Men are over 1.5 times as likely to suffer damage as women. Acute inflammatory demyelinating polyradiculoneuropathy, which accounts for 90% of cases in North America and Europe, is the most common subtype.[1] Although symmetrical paralysis of the extremities is the most typical sign of GBS, there are numerous unusual early symptoms as well, including unilateral ptosis, visual problems, urinary retention, unilateral peripheral facial and bulbar palsy, and ophthalmoplegia. The role of Intravenous immunoglobulin (IVIG) is a proven effective treatment for GBS. This case will discuss the significance of IVIG in improving the condition.

CASE REPORT

A 12 years old boy was taken to the tertiary care hospital with the chief complaints of Weakness in bilateral upper and lower limbs, unable to walk, trouble in swallowing, polyarthralgia, fever spikes followed by breathing difficulty and cough. He had a past history of fall at school and also had a history of upper respiratory tract infection, 2 weeks back. On Systemic examination the patient was conscious and mobilized with S1, S2+ and signs of respiratory distress. The MRI imaging showed no evidence of parenchymal demyelination. On laboratory investigation patient's ASO, ESR, CRP count count was elevated with impaired thyroid function test. Physician planned a MRI to rule out GBS and suggested to do NCV if a MRI were found to normal. Initially the physician started treatment with two antibiotic Cefuroxime 1.5gm and Doxycycline 100mg. Breathing difficulty and cough were managed by bronchodilators and corticosteroids. The hypothyroidic stage was managed by Thyroxine tablet. After 5 days of admission, patient developed pruritic hyperpigmented scaly plaques over groin area and suggested for dermatology consultation and prescribed antifungals for topical and oral administration.

DISCUSSION

GBS also known as acute inflammatory demyelinating polyradiculoneuropathy is considered to one of the more common neurological condition in North America due its incidence of 1-7 per 1,00,000.[2-4] In India GBS occur more commonly at a younger age but in western countries it occur in the 5th decade.[5] The condition can occur equally in both gender equally and at any age.

Most GBS patients experience ascending paralysis, which commonly starts in the legs and progresses to the limbs. 25% of patients experience respiratory depression and need mechanical ventilation. Ataxia and involvement of the cranial nerves predominate in the unusual version of GBS known as Miller Fisher syndrome. More than 60% of patients describe prior infection symptoms.[6] The most significant triggers include upper respiratory tract infections and infectious diarrhoea brought on by C. jejuni. GBS only occurs in a very small percentage (0.1%) of patients with C. jejuni gastroenteritis. Typically, neurological symptoms start between 3 days and 6 weeks after exposure. Sensory symptoms frequently appear before or at the onset of weakness, and many patients complain of a tingling or pricking sensation (paraesthesias) in their hands and feet. Distal numbness, back pain, progressive limb weakness or altered gait are also common.

Since Guillain-Barré syndrome (GBS) is regarded as a clinical diagnosis, a diagnosis may typically be made confidently at the patient's bedside. The ability to distinguish GBS from its imitators may be helped by electromyography and nerve conduction investigations. Technology is used in nerve conduction studies (NCS) to distinguish between axonal and demyelinating forms of neuropathy. Due to the Wallerian degeneration of sensory and motor nerve fibres, electrodiagnostic studies should be performed 10 to 14 days after the onset of symptoms; however, numerous studies have shown that early, nonspecific findings may be helpful in diagnosing GBS as early as 3 to 7 days after the onset of symptoms.[7,8] A typical albuminocytologic dissociation pattern is visible in cerebral spinal fluid (CSF). This expression denotes spinal fluid with normal white blood cell counts and increased CSF protein levels. A breakdown of the blood-nerve barrier caused by inflammation in GBS may be indicated by imaging investigations such as magnetic resonance imaging (MRI) spine that demonstrate amplification of the nerve roots. To rule out further causes of quadriparesis or facial diplegia, such as transverse myelitis or intracranial illness, MRI is particularly helpful in GBS.[9] There are two treatments that have been shown to be effective in randomised controlled trials for Guillain-Barré syndrome (GBS). These either include plasma exchange or intravenous immunoglobulin (IVIG). In this case report the immunoglobulin have a great role in symptom recovery. In our case the physician initially planned to give 3 vials of 5g/100ml IVIG. In our case patient having impaired thyroid hormone level. So it is necessary to pay attention to the transition thyroid function during the course of GBS.

CONCLUSION

GBS, a rare neurological condition occurs when a portion of the peripheral nervous system is unintentionally attacked by the immune system. GBS can cause anything from a very mild case with transient weakness to a nearly fatal paralysis that prevents from breathing independently. Fortunately, even those who have the most severe instances of GBS eventually recover. Some people will still have some weakness when they recover. Untreated GBS may affect of muscle that are responsible for breathing and also increased chances for getting infections, blood clot formation, immobility. This condition require an urgent management so switch to immunoglobulin if complaints worsen. IVIG play an important role to reduce the severity and provide quick response. Also increased chances for dermatological infection so proper care should be given to evaluate such symptoms.

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CONFLICTS OF INTEREST

There are no conflicts of interest in this work.

REFERENCE

1. Sudulagunta SR, Sodalagunta MB, Sepehrar M, et al. Guillain barre syndrome: Clinical profile and management. German Med Sci, 2015; 13.
2. Chiò A, Cocito D, Leone M, Giordana MT, Mora G, Mutani R. Guillain–Barré syndrome: A prospective, population based incidence and outcome survey. Neurology, 2003; 60: 1146–50.
3. Hughes RA, Rees JH. Clinical and epidemiologic features of Guillain–Barré syndrome. J Infect Dis, 1997; 176: S92–8.
4. Alter M. The epidemiology of Guillain–Barré syndrome. Ann Neurol, 1990; 27: S7–12.
5. Van den Berg B, van der Eijk AA, Pas SD, et al. Guillain-Barré syndrome associated with preceding hepatitis E virus infection. Neurology, 2014; 82(6): 491–497.
6. Newswanger DL, Warren CR. Guillain–Barre syndrome. Am Fam Physician, 2004; 69(10): 2405–10.
7. Haslam RH. Chapter 567, Guillain–Barre syndrome. In: Nelson Textbook of Pediatrics, 15th edn, Behrman RE, Kliegman RM, Arvin AM (Eds.). Philadelphia, PA: WB Saunders, 1996; pp. 1761–2.
8. Evans OB, Vedanarayanan V. Guillain–Barre syndrome. Pediatr Rev, 1997; 18(1): 10–6.
9. Wajpeyi SM. Role of ayurveda in the management of Gullain Barre syndrome. Int J Ayurvedic Med, 2018; 9: 288-92.