

Gullain-Barrè Syndrome

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Abstract: *Guillain-Barré syndrome, the body's immune system attacks part of the peripheral nervous system. It has an annual incidence of 1/1000,000 across several studies. It can occur at any age with a slight male preponderance and with seasonal variations. The syndrome can affect the nerves that control muscle movement as well as those that transmit pain, temperature and touch sensations. This can result in muscle weakness and loss of sensation in the legs and/or arms. Guillain-Barré syndrome is often preceded by an infection. This could be a bacterial or viral infection. It is a rare condition, and while it is more common in adults and in males, people of all ages can be affected. Diagnosis is based on symptoms and findings on neurological examination including diminished or loss of deep-tendon reflexes. A lumbar puncture may be done for supportive information. In this case a 31-year-old male patient presented with sudden onset of weakness of bilaterallower and upper limbs, history of fever, loose stools and also with difficulty in swallowing. Neurological opinion was taken and was advised for intravenous immunoglobulin.*

Keywords: lower and upper limbs, immunesystem, muscle movement, deep-tendon reflexes

1. Introduction

Guillain-Barré syndrome is a rare but serious autoimmune disease of the peripheral nervous system.^[3] It was reported by Guillain, Barré, and Strohl, in 1916.^[4] The first symptoms of GBS are usually tingling and muscle weakness that begins in the lower extremities. The entire body can eventually become paralyzed. The exact causes are still unknown. Once they start to occur, the symptoms of GBS tend to develop very rapidly, over a small number of days, usually causing the highest levels of weakness within the first 2 to 3 weeks of symptom onset. The onset often follows an infection. Most people fully recover within 12 months, but full recovery may take up to 3 years in some cases. Guillain-Barré syndrome is classified into three types Acute inflammatory demyelinating polyradiculoneuropathy (AIDP), Miller Fisher syndrome (MFS), Acute motor axonal neuropathy (AMAN) and acute motor-sensory axonal neuropathy (AMSAN). Symptoms and other complications include: weakness in the lower body, moving upward, general instability when walking less control over facial muscles during activities such as chewing or talking, cramp-like pain that gets worse at night, lack of control over the bowel or bladder, pain, with around 50 percent of people with GBS experiencing severe nerve pain that may need drug management a faster heart rate than normal, high or low pressure, blood clots, pressure sores if a person is immobile for a considerable length of time, difficulty breathing, a future relapse of the condition in 3 percent of people with GBS, psychological and cognitive difficulties.^[5]

2. Case Report

A 31-year-old male patient presented with progressive weakness in bilateral upper limb and lower limb with fever 4 days prior to the onset of his weakness. He also presented with neck weakness, loose stools 4 days back. His muscle power was diminished in both the upper limb (4/5) and lower limb (1/5) the patient was confined to bed.

Nerve conduction study was done and revealed a reduced velocity and amplitude in both motor and sensory nerves.

The patient was in intensive care unit and was put on multivitamin. Tracheostomy was also done. The patient was treated with intravenous immunoglobulin (IvIg) 30gm/day, which was given for 5 days and patient treated symptomatically, also physiotherapy was initiated. Following this there was gradual improvement in his neurological status and after 62 days of treatment he was discharged.

3. Discussion

Guillain-Barré syndrome occurs in people of all ages.^[5] GBS can be a devastating disorder because of its sudden and rapid, unexpected onset. Fortunately, 70% of people with GBS eventually experience full recovery. With careful intensive care and successful treatment of infection, autonomic dysfunction, and other medical complications, even those individuals with respiratory failure usually survive.^[6] The development of the condition usually follows a pattern. Prior to developing the condition, most people with Guillain-Barré syndrome have a bacterial or viral infection. The first phase of Guillain-Barré syndrome, during which signs and symptoms of the condition worsen, can last up to four weeks, although the peak of the illness is usually reached in one to two weeks. During the second phase, called the plateau, signs and symptoms of Guillain-Barré syndrome stabilize. This phase can last weeks or months. During the recovery phase, symptoms improve. However, some people with Guillain-Barré syndrome never fully recover and can still experience excessive tiredness (fatigue), muscle weakness, or muscle pain.^[5] About 30 percent of those with Guillain-Barré still have a residual weakness after 3 years. About 3 percent may suffer a relapse of muscle weakness and tingling sensations many years after the initial attack. About 15 percent of individuals' experience long-term weakness, and muscle strength may not return uniformly. The affected person's immune system begins to attack the body itself. It is thought that, at least in some cases, this immune attack is initiated to fight an infection and that some chemicals on infecting bacteria and viruses resemble those on nerve cells, which, in turn, also become targets of attack. Since the body's own immune

system does the damage, GBS is called an autoimmune disease.^[6]

4. Conclusion

There is no known cure for Guillain-Barré syndrome, but therapies can lessen the severity of the illness and accelerate the recovery in most individuals. Guillain-Barré syndrome is one of several disorders involving weakness due to peripheral nerve damage caused by the person's immune system. While GBS comes on rapidly over days to weeks, and the person usually recovers, other disorders develop slowly and can linger or recur. People with GBS are usually admitted and treated in a hospital's intensive care unit. Plasmapheresis (also known as plasma exchange) and high-dose immunoglobulin therapy (IVIg) are used.^[6]

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