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A Case Study on Guillain Barre Syndrome

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ABSTRACT:
Guillain barre syndrome is a condition which is rarely seen in people and is an autoimmune condition which effects the body's nervous system. It is an idiosyncratic disease. The onset of this condition can be sudden and unexpected effecting the lower limbs [legs] first. These patients experience progressive weakness and tingling sensations as their first symptoms. There is no cure for guillain barre syndrome but some people get cured completely on treatment while it may be life threatening in others. In some cases, patient may be affected with paralysis. The incidence of this syndrome is 1-2cases per 1,00,000 people annually and men are more likely to be affected than women.

KEYWORDS:
Demyelinated, AMAN, AMSAN, neurons

I. INTRODUCTION:

The guillain barre syndrome is an autoimmune condition of the body which effects the peripheral nervous system of the body. The nerves that control muscle movement are affected due to which muscle weakness in legs and arms are experienced. In severe cases it results in near total paralysis which is rare. It is not contagious and is not passed down through families.

AETIOLOGY:

The cause of this syndrome is idiosyncratic but some factors trigger the condition. Many cases have been reported following the infection Zika Virus. It is also seen in patients post COVID-19 virus. Some bacteria and virus like influenza, mycoplasma, pneumonia, HIV, herpes surplex etc can also trigger this condition. The disorder mostly has appeared weeks after respiratory or gastro-intestinal tract infection or after surgery.

EPIDEMOLOGY:

It can occur in any age groups and the incidence increases with increasing age. An average of 1.3 cases per population of 1,00,000 are recorded all over the world. Men are more prone to get effected than women. AIDP form occurs most common in Europe and North America while AMAN occurs most in East Asia.

PATHOPHYSIOLOGY:

The GBS destroy the myelinated sheath of the peripheral nerves making them demyelinated due to which the nerves prevent transmitting signals to the brain. There are three phases guillain barre syndrome 1. Progressive phase [lasting up to 4 weeks] 2. Plateau phase [from days to months] 3. Recovery phase

TYPES OF GUILLAIN BARRE SYNDROME:

1. Acute Inflammatory Demyelinating Polyradiculoneuropathy [AIDP]- most common in Europe and North America. Its most common sign is muscle weakness of lower limbs which gradually spreads upwards.
2. Miller Fisher Syndrome [MFS]- its more common in Asia. It starts with paralysis in eyes.
3. Acute Motor Axonal Neuropathy [AMAN]- is acute motor weakness, areflexia, ataxia and absence of sensory symptoms which are progressive.
4. Acute Motor Sensory Axonal Neuropathy [AMSAN]- is rare and involves axonal degeneration of both sensory and motor fibers.

SIGNS AND SYMPTOMS:

- Tingling of feet and hands
- Weakness of muscles
- Imbalanced posture
- Difficulty in swallowing
- Low or high BP
- Difficulty in breathing
- Double vision
- Severe cramp like pains at night
- Difficulty in facial expressions
- Sensory loss
- Eye muscle weakness
- Urine retention

Guillain barre syndrome can be diagnosed by physical examination and neurological examination.

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Neurological examination includes spinal tap test and electromyography.

The most common treatment that speed up the recovery of patients are : intravenous immunoglobulin therapy, plasmapheresis, corticosteroids, multivitamins, physiotherapy, speech therapy.

II. CASE PRESENTATION:

A 48yrs old male patient was admitted to neurology department of King George Hospital with chief complaints of weakness of bilateral lower limbs in the past 10 days and complaint of paraesthesia [pins and needles sensations] in both upper and lower limbs for ten days. There is no loss of sensation, no loss of sensation of bladder, no history of trauma and no history of vomiting or loose stools. He is a smoker. Patient is conscious and coherent.

The vitals on the date of admissions are BP 130/80mmHg, pulse rate 86b/min, respiratory rate 18b/min, SPo2 96% with RA. The haemoglobin level is 5.7g%, packed cell volume is about 19%, total count is about 6200 cells/m. Renal function test like serum creatinine is about 1mg/dl and blood urea is about 30mg/dl. Liver function tests like total serum bilirubin 0.7mg/dl, of which direct bilirubin is 0.2mg/dl and indirect bilirubin is of 0.5mg/dl, SGOT – 53U/L, SGPT- 56U/L, ALP- 62U/L. The value of serum electrolytes is sodium- 140mmol/l, calcium- 4.19mmol/l, chlorine- 110mmol/l.

The brugada sign is positive which includes dizziness, fainting, grasping, laboured breathing particularly at night. On sensory examination that is straight leg raise test on both sides, it is concluded that guillain barre syndrome [AMSAN] with anaemia.

Patient was treated with the following medications for 10 days – Tab Baclofen 10mg PO, Tab Pregabalin 75mg PO, Tab Pantop 40mg PO, Tab B Complex PO, Tab Methyl Cobalamin 500mg PO, inj human IVIg 0.4g/kg slow infusion, IFA PO BD, inj Methyl Prednisolone 1gm in 100ml OD and Albendazole 400mg. Patient was recommended with physiotherapy.

After treating the patient for 10 days the symptoms were reduced and the patient was discharged with counselling.

III. CONCLUSION:

Guillain barre syndrome is rare but most people recover within 6-12months from most of the symptoms. But it takes several months to years to cope up with the nerve damages. In very less cases this syndrome causes death.

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