* Mrs. S, aged 35 years, reports numbness, tingling, and weakness in her lower extremities. She is extremely worried because she remembers that her mother had these symptoms prior to being diagnosed with multiple sclerosis (MS).

**1.What is multiple sclerosis?**

Multiple sclerosis (MS) is a chronic disease affecting the central nervous system. is an autoimmune demyelinating disorder occurring when the immune system attacks nerve fibers and myelin sheathing (a fatty substance -protective sheath- which surrounds/insulates healthy nerve fibers) in the brain and spinal cord. This attack causes inflammation and selective destruction, which destroys nerve cell processes and myelin, interferes with electrical messages between the brain and other parts of the body. As with other autoimmune disorders, the pathogenesis appears to involve both genetic and environmental influences.

**2.Why does the nurse think Mrs. S is so concerned that it could be MS?**

1.The risk for developing MS is 15-fold higher when the disease is present in a first-degree relative.

2.MS affect young people than any other acquired chronic neurological disease.

3. The age of onset is typically between 18 and 45 years. Women are affected twice as frequently as men.

**3.What diagnostic testing would be helpful to confirm or rule out MS?**

1.Blood tests: to help rule out conditions that imitate multiple sclerosis, but the presence of MS cannot be detected in the blood.

A blood test is currently being developed that will be able to detect biomarkers that are associated with MS. While this test likely won’t be able to diagnose MS on its own, it can help doctors evaluate risk factors and make diagnosis just a little easier.

2.Magnetic resonance imaging (MRI): The precise image gives clear evidence of scar tissue in the deep parts of the brain or spinal cord that is characteristic of MS. However, abnormal spots on the brain MRI can be caused by other conditions.

3.Lumbar puncture, also called a spinal tap: to examine the cerebrospinal fluid might be helpful in diagnosing MS in some people, but it is no longer considered necessary in all instances. Abnormalities that might appear in the cerebrospinal fluid can be very helpful in establishing a diagnosis but, like other tests, spinal taps are not foolproof in diagnosing MS.

4.Evoked potential (EP) tests: Electrical tests of the nerve pathways, are very helpful in confirming whether MS has affected the visual, auditory, or sensory pathways. These tests are done by placing wires on the scalp to test the brain's response to certain types of stimulation, such as watching a pattern on a video screen, hearing a series of clicks, or receiving electrical impulses in your arm or leg.

* Within 24 hours, Mrs. S started to develop paralysis, which was moving up her legs. A tentative diagnosis of Guillain-Barré syndrome was made.

**4.What is Guillain-Barré syndrome?**

Guillain-Barré syndrome (GBS) is a rare, autoimmune disorder, an acute life-threatening polyneuropathy, in which a person’s own immune system attacks and damages the nerves, is thought to be an acute onset immune-mediated demyelinating neuropathy, causing muscle weakness, tingling in the extremities, loss of tendon reflexes and sometimes symmetric flaccid paralysis which may progress to involve the respiratory muscles. GBS can cause symptoms that last for a few weeks to several years. And the exact cause is unknown. Most people recover fully, but some have permanent nerve damage, some people have died of GBS.

**5.How is GB typically treated?**

Treatment is most effective if initiated early in the course of the disease.

Intravenous immunoglobulin (IVIG): the most commonly used treatment, when you have Guillain-Barré syndrome, the immune system (the body's natural defenses) produces harmful antibodies that attack the nerves. It’s made from donated blood that contains healthy antibodies. These are given to help stop the harmful antibodies damaging your nerves.

Plasma exchange (plasmapheresis): is sometimes used instead of IVIG, this involves being attached to a machine that removes the liquid portion of part of your blood (plasma) is removed and separated from your blood cells from a vein -which manufactures more plasma to make up for what was removed-, and filters out the harmful antibodies that are attacking the peripheral nerves before returning the blood to your body.

-You are also likely to be given medication to:

1.Relieve pain (pain killers), which can be severe.

2.Prevent blood clots, which can develop while you're immobile.

3.laxatives if you have constipation

4.Foley's catheter if you have difficulty peeing.

-People with Guillain-Barre syndrome need physical help and therapy before and during recovery. Your care may include:

1.being gently moved around on a regular basis to avoid bed sores and keep your joints healthy.

2.Movement of your arms and legs by caregivers before recovery, to help keep your muscles flexible and strong.

3.a feeding tube (NGT) if you have swallowing problems

4.a breathing machine (ventilator) if you're having difficulty breathing

5.Physical therapy during recovery to help you cope with fatigue and regain strength and proper movement.

6.Training with adaptive devices, such as a wheelchair or braces, to give you mobility and self-care skills.