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Guillain-Barre Syndrome
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Introduction
Guillain-Barre Syndrome consists of a group of neuropathic conditions which are characterized by the rapid onset of weakness and diminished or absent mystic reflexes. The estimated annual incidence in the United States is 16/100,000 (Walling & Dicks, 2013). Patients often present with a variety of symptoms, including difficulty swallowing, slurred speech, and autonomic problems. The presence and duration of these symptoms can be crucial in diagnosing Guillain-Barre Syndrome.

Underlying Pathophysiology
Subtypes of GBS include AIDP, AMAN, acute motor and sensory axonal neuropathy (AMSAN), acute sensory axonal neuropathy (ASAN) and Miller-Fisher syndrome. Electrophysiology is an important clinical tool for diagnosing demyelinating polyneuropathies and axonal subtypes, because it may reveal demyelination, loss of motor axon only, loss of sensory axon only, or mixed loss (Froncisz & Strover, 2014). Proposed mechanisms involve an autoimmune reaction leading to an axonal response with peripheral nerve components. Most of the pathomechanisms affect the body through mechanical or chemical and enhance the inflammatory process against specific gangliosides in the nervous system. Proposed mechanism involves an axonal toxic effect leading to an axonal response with peripheral nerve components. Most of the pathomechanisms affect the body through mechanical or chemical and enhance the inflammatory process against specific gangliosides in the nervous system.

Signs & Symptoms
The first symptoms include varying degrees of weakness or tingling sensations in the legs that correspond to the upper body. This can progress to almost complete paralysis. Common symptoms include facial weakness, diplopia, myasthenia gravis, ataxia, dysarthria, dysphagia, ophthalmoplegia, sensory loss, autonomic dysfunction, hemodynamic instability, and autonomic dysfunctions (Sebastian, 2013).

Mechanism of Guillain-Barré Syndrome
Guillain-Barré Syndrome can occur in any patient. It typically involves initial onset from injury preceded by an infection, leading to demyelination of the nerves. Understanding the risk factors and how GBS presents itself can aid in early diagnosis. Understanding the care for patients with Guillain-Barré Syndrome is crucial for treating these patients. Healthcare professionals should be educated on the signs and symptoms, and be prepared to intervene to avoid the risk of complications. Interventions such as collaboration and careful management can help reduce the length of recovery and promote better outcomes for affected individuals.

Significance of Pathophysiology
It is of utmost importance to understand the pathophysiology of Guillain-Barré Syndrome. An understanding of how it progresses and manifests itself can lead to quick diagnosis and prevention. Prevention of life-threatening complications remains the cornerstone of supportive care. Proposed demyelination of the peripheral nerves, immune dysfunction, and lead to acute respiratory muscle paralysis. Early detection of respiratory failure and anticipation of mechanical ventilation are crucial to avoid emergency intubation and cardiopulmonary arrest. Life-threatening episodes of hypoxia can result in neurologic sequelae related to autonomic dysfunction may occur in GBS patients.

Implications For Nursing Care
According to Dubey et al. (2016) “early identification of GBS may lead to earlier initiation of management, including immunomodulatory therapy, intensive care unit admission in selected patients, and multidisciplinary team involvement. The initial clinical diagnosis of GBS may be challenging. Lack of evaluation by a neurologist, neuropathic pain, preserved reflexes, and an atypical pattern of weakness were all associated with a delay in considering the diagnosis of GBS. The delay in diagnosis had a significant impact on outcome, as assessed by the clinical course of disch, and the main disease (Disch).” It is of utmost importance that nurses identify signs of a potential case of GBS as soon as possible in order to promote an optimal outcome for patients. The primary nursing management of a patient with GBS should be centered on problems with the airway related to musculoskeletal weakness or paralysis, decubitus ulcer, dysphagia, and other signs and symptoms of treatment. Nurses should plan interventions that focus on preventing complications related to immobility, such as ensuring skin integrity.

Treatment
Based on strong research evidence in adults, IVIG and plasma exchange hasten recovery from GBS in adults with significant disability. In children with acquired inability to ambulate (Barber, 2013). Common treatment modalities include corticosteroids, intravenous immunoglobulin (IVIg), therapeutic plasma exchange (TPE), central axonal fluid (CSF) filtration, and immunosuppression. Treatment with intravenous immunoglobulin and plasma exchange reduces the time for recovery to occur, although some patients remain disabled (McNair, 2013).

Conclusion
Guillain-Barre Syndrome is a serious condition that can be life-threatening. Early detection and intervention can significantly improve outcomes for patients. Patients should be educated on the signs and symptoms, and be prepared to intervene to avoid the risk of complications. Interventions such as collaboration and careful management can help reduce the length of recovery and promote better outcomes for affected individuals.

References