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Guillain-Barre Syndrome

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**Introduction**

Guillain-Barré Syndrome consists of a group of neuromuscular conditions characterized by ascending flaccid paralysis and diminished or absent myasthenic reflexes. The estimated annual incidence in the United States is 160 to 175 per 100,000 persons (Walling & Dickson, 2008).

**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 and axonal subtypes, because it may reveal demyelination, loss of motor nerve only, loss of sensory axons only, or mixed loss (Frinstein & Strete, 2014). Proposed mechanisms include an antediluvian infection leading to an autoimmune response affecting peripheral nerve components. Most of the pathogenic gains entry to the body through mucosal or genital epithelium and induce antibody production against specific gangliosides in the brain. Proposed mechanism involves an antediluvian infection leading to an autoimmune response affecting peripheral nerve components. Most of the pathogenic gains entry to the body through mucosal or genital epithelium and induce antibody production against specific gangliosides. This is dependent on bacterial factors, such as the specific lipopolysaccharide (LPS), certain host factors, such as genetic polymorphism and immune status. The presence of monocytes and lymphocytes, enhancing the inflammatory process (Chiang & Ubogu, 2013).

**Significance of Pathophysiology**

It is of utmost importance to understand the pathophysiology of Guillain-Barré Syndrome. Understanding how this condition progresses and the factors that affect it has an important contribution in providing optimal care to a patient as a future name anesthetist.

As stated by Tunkel, P. R., Barwick, B., & Benjamin, J. (2013), “the anesthetic implications for ventilator weaning are varied and can be profound” (p. 1). An individual who suffers from Guillain-Barré Syndrome is a patient who certainly requires a critical care management intensive to avoid complications associated with the disease. Being aware of the pathophysiology, risk factors, signs and symptoms of GBS is crucial for the treatment involvement caring for Guillain-Barré Syndrome can better prepare the advanced practitioner nurse for patients suffering from this condition.

**Signs & Symptoms**

The first symptoms include varying degrees of weakness or tingling sensations in the legs that can spread to the upper body. This can progress to almost complete paralysis. Common symptoms include: 
- Difficulty swallowing
- Difficulty breathing
- Loss of sensation
- Loss of automatic reflexes
- Autonomic dysfunction
- Hemodynamic instability
- Autonomic dysfunction

Implications For Nursing Care

According to Dubey et al. (2016), “lack of 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 acute 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 and the development of respiratory dysfunction” (p. 386). It is of the utmost importance that nurses identify sign of a potential case of GBS as sooner possible in order to promote optimal outcome for patients. The primary nursing management of a patient with GBS should be centered on problems with the airway related to muscular weakness or paralysis, dysphagia, and prevention of complications. This includes identifying and managing respiratory insufficiency, weakness, since patients undergo ventilator weaning, nurses should plan interventions that focus on preventing complications related to immobility, such as securing skin integrity. (Moore & Shepard, 2014).

**References**


