Myasthenia Gravis: A closer look

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**Case Study Cont’d**

The patient was sent for an immediate magnetic resonance imaging (MRI) with contrast. The results of the MRI were normal. The patient was referred to a neurologist for a consultation. While on evaluation, the patient was checked for acetylcholine receptor antibodies (AChR-Ab) which were present in the patient’s blood serum. AChR-Ab are detected in approximately 50% of patients with MG, although some patients can be MG positive in 90%-100% of patients with MG (Avoue, Law, & Aron, 2012).

**Epidemiology**

- **Guillain-Barre:**
- **Bell’s palsy:**
- **Multisystem Sclerosis:**
- **Apopletic lateral striatocapsular**
- **Poliomyelitis:**
- **Sjogren’s Syndrome:**

An Assistant Practice Nurse (APN) is important to understand the variable clinical presentations that can occur with MG. The purpose of this case presentation is to include an individual with MG. The patient presented with a case of MG. The patient was misdiagnosed or missed by a healthcare provider.

**Pathophysiology**

NMJs are formed as axon divides and enter skeletal muscles (Weeks, 2012). When stimulated, ACh is released from the nerve terminal and attaches to the nicotinic acetylcholine receptors (nAChRs) (Mestecky, 2013). The NMJ also consists of a synaptic cleft which contains acetylcholinesterase (AChE) activity. Acetylcholine (ACh) is released when nerve impulses arrive at the NMJ. When stimulated, ACh is released from the nerve terminal and attaches to the nicotinic acetylcholine receptors (nAChRs) (Mestecky, 2013). The NMJ also consists of a synaptic cleft which contains acetylcholinesterase (AChE) activity. Acetylcholine (ACh) is released when nerve impulses arrive at the NMJ.

**Clinical Features**

There are two main clinical categories of MG: generalized AChR antibody myasthenia gravis. MG symptoms are often less in the upper body compared to the lower body (Koch et al., 2013). MG can occur at any age although symptoms are often not noticed until after the first five decades (Abbott, 2010). MG has affected men and women equally. MG can be divided into three categories: generalized MG, focal or ocular MG, and thymoma with MG (Abbott, 2010). 

**Thymus**

Thymus is usually benign, thymic tumors can be malignant. The thymus is mainly involved in producing thymocytes and is tightly connected to the immune system. The thymus is the site of T cell maturation. Thymectomy is believed to be helpful in patients with MG (Koch et al., 2013).

**References**


**Case Study**

A 59-year-old Caucasian man was seen by his primary care provider (PCP) with complaints of blurred vision and increased difficulty raising his eyelids. Upon further questioning, the PCP learned the patient had recently returned home from a one week vacation in a resort. While on vacation, the patient stated he developed a bad cold with symptoms of extremely sensitive, watery eyes that were sore and irritated. Symptoms progressed throughout the week with blurry vision, drooping eyelids, and complaints of double vision and weakness in raising bilateral eyelids. The PCP ruled out both, although the patient stated his right eye was worse than the left eye. Upon returning home, the patient was first seen by his urologist who recommended further evaluation by his primary care provider (PCP).