Myasthenia Gravis

Myasthenia gravis is a disease that causes muscle weakness throughout the body. The muscles affected are the *voluntary muscles.* These are the muscles of the body we control. An example of a voluntary muscle is your hand. You can control the muscles to make the hand pick something up. An example of an *involuntary muscle* is the heart. The heart beats without any direction from you. Myasthenia Gravis is thought to be an *autoimmune disease*. That means that normal defenses of the body begin to attack the body. In this case, the immune system begins to attack cells located at the junctions of the muscles and the nerves. Initially in the disease, the facial muscles are affected first. After this, a person may develop droopy eyelids. They may have difficulty controlling facial muscles. They may have problems chewing. Swallowing and speaking may become impaired. The weakness gradually spreads to the arms and legs. It begins to affects *respiration* (breathing). About one-fourth of people go into *spontaneous* (without apparent cause) and permanent *remission* (symptoms lessen or go away). Women are affected more often. Women are affected at a younger age than men. Babies born to affected women frequently develop *symptoms* (problems) at an early age.

DIAGNOSIS

Diagnosis (learning what is wrong) can be made with blood tests. The blood tests will show *antibodies* to *acetylcholine.* Antibodies are substances that get rid of *antigens. Antigens* are produced by or introduced into the body. Acetylcholine is a chemical in the body that transmits nerve impulses. Tests such as *electromyography* may be done to examine the electrical activity in the muscle. An improvement in symptoms after having an *anti-cholinesterase* drug helps confirm the diagnosis. *Edrophonium* is an *anti-cholinesterase* drug.

TREATMENT

Anti-cholinesterase medications such as pyridostigmine (Mestinon®) or neostigmine (Prostigmin®) are usually the first treatment. These drugs help, but they do not cure the disease. *Plasmapheresis* (a plasma cleansing procedure) can be used to treat a crisis. It can also be used to prepare a person for surgery. This procedure produces short term improvement. Some cases are helped by removing the thymus gland. Steroids are used for short term benefits.

Document Released: 03/26/2002 Document Re-Released: 03/14/2011
ExitCare® Patient Information ©2011 ExitCare, LLC.