Myasthenia Gravis in Puppies

Drs. Foster & Smith Educational Staff

Myasthenia gravis is a neuromuscular disease that can be acquired as an adult or inherited and seen in the puppy. Similar conditions exist in humans. With this condition there is a failure of the nerves' ability to stimulate and control the actions of certain muscles. Nerves communicate with muscles by use of chemicals called neurotransmitters. In myasthenia gravis, the chemical neurotransmitter called 'acetylcholine' is unable to exert its function on the intended muscles, resulting in inactivity or paralysis of certain muscles.

What are the symptoms?

Most affected dogs develop a generalized muscle weakness and may collapse with muscular tremors. The symptoms in most affected puppies are noted between six and nine weeks of age. If the muscles of the esophagus are affected, there may be an inability to move food into the stomach with regurgitation as a result. Megaesophagus (enlargement of the lower portion of the esophagus) is common.

What are the risks?

Many affected dogs are severely affected. Depending on the extent of esophageal involvement, there may be a partial or complete inability to eat.

What is the management?

The treatment for myasthenia gravis is variable and the condition is generally not considered curable. If myasthenia gravis is suspected, a thorough physical exam by a veterinarian is recommended. Diagnostic testing with the drug edrophonium chloride (Tensilon), and a blood test to look for antibodies against certain muscle components will aid in achieving the diagnosis. Complete recoveries have not occurred in puppies.

Dogs affected with megaesophagus as a result of myasthenia gravis must be fed liquid diets. The food is usually placed in an elevated position, so dogs eat while standing on their hind limbs. This elevated eating stance allows liquid food to travel to the stomach via gravity.

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