



neurotransmitter

GUS

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Augustus "Gus" is a 1 year 10 month old Standard Poodle who presented to our Woodstock location for a 24 hour history of difficulty walking in the back legs. The day before, Gus was on a walk with his owners and suddenly sat down and wouldn't get back up. He had to be carried home. On neurologic examination, Gus was reluctant to move and preferred to sit or stay sternal. He was able to walk albeit weakly and demonstrated extreme fatigue that worsened with exertion. Based on his history and neurologic examination, myasthenia gravis was suspected. A Tensilon test was performed and was positive.

Presenting Complaint:

- Difficulty using back legs
- Extreme fatigue worsened by any exertion/activity including walking

Neurolocalization:

Gus' neurologic examination revealed abnormalities consistent with diffuse neuromuscular disease.

Diagnostics:

- Two view thoracic radiographs: no clinically significant findings
- Tensilon test: positive response
- Baseline cortisol: 4.8 (normal)
- Acetylcholine receptor antibody test: positive serum antibody titer
- Serology for Toxoplasmosis and Neospora: negative
- Tick-borne disease panel: negative

To view a video of the Gus's Tensilon test, please visit www.bvns.net/GUS.

Diagnosis:

- Acquired myasthenia gravis

Treatment:

Treatment for myasthenia gravis typically involves daily administration of oral anticholinesterase agents, such as pyridostigmine, which act to enhance neuromuscular transmission by prolonging the action of acetylcholine at

the neuromuscular junction. Immunosuppressive drugs are sometimes used to suppress the over active immune system. Upright feedings are necessary if megaesophagus is present.

Outcome:

Gus was started on maintenance therapy for myasthenia gravis, the oral medication pyridostigmine, while in the hospital. At the time of discharge, Gus had shown a dramatic improvement in his strength and exercise tolerance. He walked for 2-3 minutes without any evidence of fatigue and was eating well with no evidence of regurgitation. An email update from his owners one month later indicated that Gus was doing extremely well and was almost back to 100% of his normal self. He had resumed his one mile hikes with his owners and standard poodle housemate, Ari.

Take-Home Points

- Prognosis for myasthenia gravis is good in less severe cases
- Prognosis is guarded in cases with concurrent megaesophagus or persistent underlying cause such as neoplasia
- Prognosis is poor with the development of aspiration pneumonia
- MG will spontaneously resolve in some animals after months of therapy
- The acetylcholine receptor antibody titer determined by radioimmunoassay performed by the UCSD Comparative Neuromuscular Laboratory is 98% accurate for generalized acquired myasthenia gravis

What you should expect from BVNS when you refer a case:

- Faxed Referral Letter (with call to confirm receipt).
- Desire to discuss any case, whether it is a referred case or a consultation.
- Dedication to provide superior service to you and your clients.

For more information on services offered, please visit us at www.bvns.net.

Appointments available. Call now to schedule.

Thank you to Dr. Zagrocki of Union County Pet Hospital for referring Gus to BVNS. For more information or to discuss this case, please email Dr. Akin at eakin@bvns.net.