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Funded Study: Treatment of Persistent Right Aortic Arch in Dogs

University of Illinois, College of Veterinary Medicine, Veterinary Teaching Hospital

Study Title: Prospective, long-term evaluation of esophageal function and clinical outcome following surgical management of vascular ring anomalies in dogs

Purpose of Study: Vascular ring anomalies (VRA) are a result of development abnormalities during fetal growth and are an increasingly commonly recognized cause of swallowing abnormalities in dogs. A variety of different types of VRA have been reported with the result being a constriction of the esophagus resulting in difficulty in eating food. These difficulties in swallowing are most commonly seen when puppies are weaned to solid food.

Early surgical treatment of VRA is recommended to alleviate the clinical signs and prevent long-term abnormalities to the neuromuscular function of the esophagus. Traditional surgical treatment consists of open chest surgery and division of the vascular ring tissue that is causing compression of the esophagus. Minimally invasive surgery of the chest avoids open chest surgery and is performed by making small incisions into the chest to insert a camera and specialized surgical instruments. This method has been reported for the treatment of VRA in dogs and has been previously performed by the primary investigator with encouraging results.

Long term outcome following surgical treatment of VRA, specifically, objective data regarding clinical outcome and esophageal function, is lacking in the veterinary literature. This study will prospectively accrue these data following surgical treatment of VRA at the University of Illinois.

Inclusion Criteria:

- Dogs with a persistent right aortic arch (PRAA) with or without additional aberrant vessels confirmed with a video-fluoroscopic swallowing study (VFSS) and computed tomography with contrast angiography (CTA)

Eligibility Diagnostics:

Prior to study entry, pet owners will be charged an initial consultation fee. In order to be eligible to participate all patients are required to have:

1. Screening bloodwork and urinalysis performed within 30 days
2. Screening thoracic radiographs performed within 24 hours
3. VFSS and CTA performed at the University of Illinois VTH, confirming PRAA prior to surgery
4. VFSS and CTA performed at the University of Illinois VTH, evaluating esophageal function 6 months post-operatively

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The cost of advanced diagnostic imaging (VFSS and CTA) will be paid for by the study on completion of the trial. Additional diagnostics are the financial responsibility of the owner.

Treatment:

The patient will undergo minimally invasive (thoracoscopic) surgery to ligate and transect the aberrant band of tissue (ligamentum arteriosum) causing esophageal constriction. The cost of surgical intervention is the financial responsibility of the owner.

Compensation:

Owners are responsible for the cost of the initial blood work, urinalysis, and thoracic radiographs. The video-fluoroscopic swallowing study (VFSS) and CTA will be covered by the study, once the patient has completed the trial. The cost of the surgery is the financial responsibility of the owner. Post-operative complications or ongoing treatment for persistent esophageal dysfunction is the financial responsibility of the owner.

Contact Information:

If you are interested please feel free to contact Dr Jacqui Scott jscott19@illinois.edu or the Soft Tissue Surgery Service on #217-333-6808. Referring veterinarians and client calls are welcome.