



Comparison of Two Surgical Techniques and Long Term Outcomes to Alleviate Congenital Constriction in Dogs

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WHAT IS A VETERINARY CLINICAL TRIAL?

A veterinary clinical trial is a research study involving client-owned animals with the ultimate goal to advance animal and human health care! An **observational clinical trial** allows us to measure health outcomes through data and sample collection in groups of animals according to a research plan or protocol. This allows us to gain more knowledge about that disease process and improve ways to prevent, diagnose or treat diseases.

What is a Vascular Ring Anomaly?

Vascular ring anomalies (VRA) are a result of developmental abnormalities during fetal growth and are an increasingly common cause of swallowing abnormalities in dogs. A variety of different types of VRAs have been reported, but the common result is constriction of the esophagus which causes difficulty when eating food. Most often, VRAs are diagnosed when puppies are transitioned 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.

What is the Purpose of This Study?

Standard of care surgical treatment for VRA involves an open chest surgery with division of the vascular ring tissue that is causing compression of the esophagus. Recently, minimally invasive surgical (MIS) techniques have also been described for the treatment of VRA and these avoid the need for open chest procedures, instead small incisions are made into the chest and a camera and specialized surgical instruments inserted.

The purpose of this study is to evaluate long term outcomes in dogs with VRA treated with either open or MIS, specifically looking at their clinical outcome and esophageal function.

INCLUSION CRITERIA

Dogs with a vascular ring anomaly and interested in pursuing CT and surgery will be eligible for this study.

EXCLUSION CRITERIA

Dogs with a diffusely enlarged esophagus or esophageal disease unrelated to a vascular ring anomaly will not be eligible to participate in this study.

Financial Incentives

The costs associated with the esophagoscopy (specialized camera assessment during surgery) and 6 months post-surgery swallowing study will be covered.

This study is generously funded by **OVC Pet Trust**, the **Lulu Clubb Fund** and the **Crusoe Fund**.



1

After consultation with the OVC Internal Medicine and/or Surgery service, your dog will have a routine computed tomography (CT) scan.

In addition, a pre-operative video-fluoroscopic esophageal swallowing study will also be performed. The swallowing study involves giving your dog a liquid food and monitoring the movement through its throat while standing. There is no sedation involved for the swallowing study.

Both of these procedures are routine for dogs diagnosed with VRA and planning to undergo surgery.

2

Your dog will have surgery within 2-4 weeks. At the surgery appointment, you will be asked to complete a short study questionnaire about your dog.

Surgery will be performed using either open or minimally invasive technique, the choice will depend on various factors at the time of diagnosis. The goal of the surgical procedure will be to divide the vascular ring tissue that is causing esophageal compression.

3

Following surgery, your dog will recover in ICU under careful monitoring and be discharged to your care ~48 hours later. Postoperative care instructions and any necessary medications will be provided to you by your dog's clinician.

4

Approximately 6 months following surgery, your dog will need to return to OVC for a recheck appointment and repeat swallowing study.

At this time, we also ask you to complete a study questionnaire about your pet and its recovery post-surgery.

