



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

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WHAT IS A 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 development 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 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 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?

Currently in veterinary patients, standard of care surgical treatment for VRAs involves an open chest surgery with division of the vascular ring tissue that is causing a compression of the esophagus. Minimally invasive surgical (MIS) techniques have also been described for the treatment of VRA. MIS avoids the need for open chest procedures and is performed by making small incisions into the chest to insert a camera and specialized surgical instruments. The objective of this study is to evaluate the long term outcome following both open and MIS surgical treatment of VRA, specifically, objective data regarding clinical outcome and esophageal function.

INCLUSION CRITERIA

Dogs with a vascular ring anomaly and interested in pursuing CT & Surgery

EXCLUSION CRITERIA

Dogs with a diffusely enlarged esophagus or esophageal disease unrelated to a vascular ring anomaly

FINANCIAL INCENTIVES

The cost of esophagoscopy (specialized camera assessment during surgery) and 6 months post-surgery swallowing study will be covered by the study (~\$600 total value).

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 pet will undergo a routine CT imaging scan.

In addition, a pre-operative video-fluoroscopic esophageal swallowing study will also be performed. This swallowing study involves giving your pet a liquid food and monitoring the movement through your pet's 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 standard of care surgery.

2

Your pet will undergo surgery within 2-4 weeks. At time of admission, you will be asked to complete a short study questionnaire about your pet.

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

3

Your pet will recover in ICU under careful monitoring and be discharged to your care ~48 hours later.

4

Approximately 6 months following surgery, your pet will need to return to OVC for a repeat of the video-fluoroscopic esophageal swallowing study.

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

