



RESEARCH PROGRESS REPORT SUMMARY

Grant 02233-A: Evaluation of a Novel Technique for Gastric Decompression in Dogs with Gastric Dilatation and Volvulus

Principal Investigator: Dr. J. Brad Case, DVM, MS

Research Institution: University of Florida

Grant Amount: \$12,960.00

Start Date: 11/1/2015

End Date: 4/30/2017

Progress Report: Mid-Year 2

Report Due: 4/30/2017

Report Received: 4/6/2017

(The content of this report is not confidential and may be used in communications with your organization.)

Original Project Description:

Gastric dilatation-volvulus (GDV) is a common medical and surgical emergency that involves severe gas distention and malposition of the stomach in dogs. GDV results in profound distension of the stomach which compresses vital blood vessels and organs within the abdomen, thus reducing oxygen delivery to these organs. The ultimate result is tissue death and toxins in the blood stream. Surgery is necessary to correct the condition, and overall mortality rates range from 10-50% depending on severity and duration of gastric dilatation. For this reason, rapid and effective decompression of the stomach is critical for successful treatment of dogs with GDV. Currently, approaches to decompression have a temporary effect and gas can re-inflate the stomach within minutes. Oftentimes affected dogs are not near a facility with surgical capabilities when they develop signs of GDV. Owners may then need to drive hours to a facility in which emergency stabilization and surgery can be performed.

A new, minimally-invasive technique, similar to that used in human medicine, will be tested for its ability to immediately and continuously alleviate the gas distention in the stomach of GDV patients using a specialized catheter, thus allowing the patient to be stabilized and/or transported for surgery. This relatively inexpensive and rapid procedure could have far-reaching impact for dogs with this devastating condition.



Publications:

Manuscript in preparation.

Report to Grant Sponsor from Investigator:

After being awarded the grant from the AKC CHF, we began to set up the study design and workflow within our large veterinary specialty institution. This involved a few months of preparation including: set-up of financial accounts within the university, ordering of supplies and their integration into our hospital, development of procedural protocols for the hospital including orientation to the supplies and techniques to our surgery, emergency, and anesthesia departments. These preparations did delay our anticipated start date, however have paid off greatly in how smoothly the study protocol has run as cases are enrolled.

To date, 13 out of the intended 16 dogs have presented to our facility that met the safety inclusion criteria and were enrolled, seven of which have had the novel technique in place with promising results. We still have to enroll at least 3 more dogs to go to reach our goal of 16 dogs in total, however, we would recruit as many as we could within the study period. Currently, funding may allow up to 5 additional dogs to be enrolled which would increase the power of the study.

Fewer cases of GDV than we anticipated have presented to our facility since the study became active. This is one of the challenges of studying a disease in naturally occurring cases. It can be difficult to predict how often they will come in.

To help increase enrollment, we sent out newsletters to local veterinarians, included a page on our hospital's website highlighting the research, and have also had stories in the local news and local veterinary periodicals. These efforts helped increase our numbers from 3 cases to 13 cases over the past 10 months. We are hopeful that this will continue to boost enrollment as it did over the past 10 months. We believe that we will reach the target number of patients enrolled in the next 12 months.

Based on the preliminary data, we believe that this new decompression technique will be a viable option in cases where extended decompression would be necessary- such as when cases need to be transferred to a surgical center (travel delays), while awaiting surgery at an emergency facility, financial delays, emotional delays. The technique could be easily placed, and this study helped define the safest practices to place them. For example: the 2 cases of TTG that had failures were not placed with direct ultrasound guidance- rather ultrasounded then placed. Since the change was made to place the first T-fastener under direct ultrasound guidance- no further complications have occurred with the technique. It appears that no difference between techniques will be detected- if this remains true after evaluation of the completed data set- it would mean that the new technique does not significantly differ to the



trocar technique which is already used ubiquitously- and it would have the added benefit of providing a lasting gastric decompression preoperatively and result in more stable patients.