

Comparison of Gastric Transit Time in Healthy Dogs and Dogs With Signs of Gastric Hypomotility

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Ambulatory light-based imaging is a gastrointestinal imaging technique performed by oral administration of a fully automated camera device contained in a capsule (ALICAM) that is propelled by natural peristalsis. Gastric transit time (GTT) can be determined by visualization of the capsule's passage from the stomach into the duodenum and correlating images with the clock function of the device. The aim of this study was to use the ALICAM system to compare the GTT in healthy dogs with the GTT in sick dogs with clinical signs that could be consistent with gastric hypomotility.

The study population consisted of a group of 10 clinically healthy dogs and a group of 26 dogs with retching, regurgitation, and/or vomiting. All dogs were fasted for 16–24 hours before and 8 hours after capsule administration. Studies were reviewed by a board-certified internist. For each case, GTT was determined. A Wilcoxin rank sum test was used to compare the two groups.

The median GTT (min-max) in healthy dogs was 86 (13–218) minutes. The median (min-max) GTT in sick dogs was 187 (2–1405) minutes. In 7 sick dogs, the capsule remained in the stomach for the duration of the study (435–1405 minutes) and the recorded time represented the minimum GTT. The GTT for sick dogs was significantly longer than for healthy dogs ($P = 0.046$).

The results of this study suggest that gastric hypomotility occurs in a subset of dogs presenting with retching, regurgitation, and/or vomiting. Further studies are needed to determine if these dogs would benefit from prokinetic therapy.

This abstract was presented at the 2016 ACVIM Forum.

