Normal and Abnormal Findings in the Canine Gastrointestinal Tract Using Ambulatory Light-Based Imaging

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Ambulatory light-based imaging (ALI) is a new imaging modality that allows for non-invasive endoluminal visualization of the gastrointestinal mucosa. ALI is performed by oral administration of a capsule containing a fully automated camera (ALICAM) that is propelled by natural peristalsis. The capsule is retrieved from the dogs' feces and images are downloaded. Familiarity with normal and abnormal findings is essential to accurate interpretation of these studies, but these have yet to be documented in veterinary patients. The aim of this study was to present a gallery of normal and abnormal images of the canine gastrointestinal tract using ALICAM.

ALICAM studies from 65 dogs were evaluated retrospectively by a board-certified internist. The average study consisted of 21,003 images obtained over 16 hours. Patients evaluated included 55 dogs with clinical signs of gastrointestinal disease and 10 asymptomatic dogs. The patients ranged in age from 4.5 months to 13.7 years old and in weight from 7.8 to 72 kg. Images representative of normal mucosa and common lesions were saved and logged.

The most common reasons for ALICAM administration were vomiting, diarrhea, signs of gastrointestinal bleeding, or a combination of several gastrointestinal signs. Gastric lesions identified in dogs with gastrointestinal signs included irregular mucosa, polyps, ulcers, erosions, masses and foreign material. Small intestinal lesions identified included irregular mucosa, dilated lacteals, ulcers, erosions, masses, and parasites (tapeworms and hookworms). Colonic lesions included masses and erosions.

Establishing characteristics of normal and abnormal findings is an important step in the evolution of ALI as a diagnostic test.

This abstract was presented at the 2016 ACVIM Forum.

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