ALICAM and Gastrointestinal Disease in Dogs
Part B: Visualization of the Duodenal Papilla Using ALICAM Compared to Conventional Duodenoscopy in Dogs

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Anecdotally, the duodenal papilla (DP) is difficult to identify with conventional, front-view duodenoscopy. A side-view endoscope can improve detection, but is not routinely available. ALICAM is an ingestible capsule imaging system that utilizes 4 side-view cameras to record intraluminal images. The objective of this study was to calculate the rate of DP visualization in dogs using ALICAM and compare that to conventional duodenoscopy.

The rate of DP visualization (major or minor DP) was retrospectively assessed in 66 ALICAM studies consisting of 15 healthy and 51 symptomatic dogs evaluated for gastrointestinal disease (Group 1) and prospectively in 12 dogs undergoing gastroduodenoscopy for gastrointestinal disease (Group 2).

ALICAM interpretations and endoscopic procedures were performed by board-certified internists. Group 2 was slightly older than Group 1 (mean ± SE years; 9.42 ± 1.07 vs. 7.14 ± 0.50, P = 0.07) and weighed significantly less (mean ± SE kg; 13.90 ± 3.63 vs. 25.17 ± 1.40, P = 0.003), however, neither age (P = 0.44) nor weight (P = 0.94) was independently associated with DP visualization. The DP visualization rate was significantly greater with ALICAM (45/66; 68.2%) compared to endoscopy (4/12; 33.3%). Dogs that had ALICAM were 4.3 times more likely to have their DP visualized (P = 0.024). Healthy dogs had a higher DP visualization rate (13/15; 86.7%) compared to symptomatic dogs (36/63; 57.1%, odds ratio [OR]=4.9, P = 0.024). In symptomatic dogs, the DP visualization rate remained greater with ALICAM (32/51; 62.7%) compared to endoscopy (4/12; 33.3%) and approached significance (OR=3.4, P = 0.06).

Overall, ALICAM detected the DP at a higher rate than endoscopy. The clinical implications of this are not known, but warrant future studies.

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