

Cytology for Diagnosis of Chronic Enteropathies in Dogs & Cats?

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In the Literature

Ruiz G, Verrot L, Laloy E, Benchekroun G. Diagnostic contribution of cytological specimens obtained from biopsies during gastrointestinal endoscopy in dogs and cats. *J Small Anim Pract.* 2017;58(1):17-22.

FROM THE PAGE ...

Histopathologic examination of biopsy samples—collected via endoscopy, laparoscopy, or laparotomy—is considered the gold standard for the definitive diagnosis of chronic enteropathies in dogs and cats. However, it has been shown that there is great interobserver variation in the histopathologic assessment of GI biopsy samples, regardless of means of collection.¹ In addition, time is required for submission and processing of biopsy samples and for histopathologic interpretation. A definitive diagnosis is often not available until a week after biopsy collection, which can delay evidence-based therapy in a patient.

This study assessed cytologic evaluation of endoscopic biopsy samples. The squash and imprint techniques, 2 techniques for generating such cytologic preparations, were compared. Endoscopic biopsy samples from the stomach, small intestine, and large intestine of 18 dogs and 5 cats were evaluated.

Overall, the imprint technique was found to be unreliable. However, cytologic assessment of squash samples showed agreement with histopathologic assessment in 30 of 46 samples (65.2%). Agreement between squash and histopathology was best in the large intestine, where 4 of 5 samples (80%) showed agreement, and in the small intestine (14/18 samples; 77.8%). Agreement was not as good in the stomach (12/23 samples; 52.2%). Also, lymphocytic-plasmacytic inflammation was often correctly identified by cytology, whereas lymphoma was not often correctly identified. Spiral

organisms and associated mast cell infiltration in the stomach were more accurately identified via cytology than via histopathology, but the clinical importance of spiral organisms in the stomach of dogs and cats is regarded as questionable.²

Because of the small number of patients and the limited number of cytologic preparations in each patient, this study should be considered preliminary. However, the study suggested that cytologic squash preparations of endoscopically collected biopsy samples can be useful as quick diagnostic tools until histopathology results are available.

... TO YOUR PATIENTS

Key pearls to put into practice:

- 1 Squash cytology preparations of endoscopically collected biopsy samples can be used to make a preliminary diagnosis in dogs and cats with chronic enteropathies.
- 2 Cytologic assessment of endoscopic biopsy specimens does not replace histopathologic assessment.
- 3 Caution should be used when excluding GI lymphoma based on cytologic evaluation.

References

1. Willard MD, Jergens AE, Duncan RB, et al. Interobserver variation among histopathologic evaluations of intestinal tissues from dogs and cats. *J Am Vet Med Assoc.* 2002;220(8):1177-1182.
2. Neiger R, Simpson KW. *Helicobacter* infection in dogs and cats: facts and fiction. *J Vet Intern Med.* 2000;14(2):125-133.