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APPRAOCH OF CHRONIC VOMITING AND DIARRHEA IN CATS
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INTRODUCTION
Gastrointestinal (GI) disorders are among the most common problems encountered in Feline Medicine. Most vomiting and diarrhea episodes occur suddenly and resolve quickly. However, some patients may present vomiting and/or diarrhea over a period of weeks to months. These chronic digestive disorders are associated with gastrointestinal disorders as well as non-gastrointestinal tract related conditions. Chronic kidney failure, chronic pancreatitis, cholangitis, or hyperthyroidism in older cats are common causes of chronic vomiting and/or diarrhea.

After a short introduction to the global approach of cat with chronic digestive signs, the main parts of this presentation will concentrate on GI-related disorders as a cause of chronic vomiting or diarrhea.

DIAGNOSTIC WORKUP
First step
The first step in the approach to chronic digestive signs in cat is to eliminate potential causes originating outside the GI tract. A careful investigation of the patient’s history should always be the starting point even if this may prove more difficult in cats than in dogs because of their particular behavior. The aim should always be to get as much information as possible by questioning the patient’s owner. General feeding habits, environment, current medication, as well as contact to other animals should be discussed with the owner. The history can indicate the location, severity, and probable cause of the disease process. In case of chronic vomiting with hematemesis, bloody diarrhea or localized signs such as abdominal pain or jaundice, a more aggressive work-up is necessary. Last but not least the patient’s history may help to categorize the diarrhea into »small bowel » or « large bowel » origin, though making a distinction between these localizations may prove more difficult in cats than in dogs. One study found that 53% of cats with IBD (27/51) had colitis, and 16 of the 27 had concurrent histological evidence of small intestinal disease.

Physical examination can reveal abnormal findings such as loss of body condition, dehydration, weakness or lethargy, pallor and vomiting with hematemesis, bloody diarrhea or localized signs such as abdominal pain or jaundice, a more aggressive work-up is necessary. Last but not least the patient’s history may help to categorize the diarrhea into »small bowel » or « large bowel » origin, though making a distinction between these localizations may prove more difficult in cats than in dogs. One study found that 53% of cats with IBD (27/51) had colitis, and 16 of the 27 had concurrent histological evidence of small intestinal disease.

Simple diagnostic tests such as complete blood count, a biochemical profile, a urinalysis, FeLV/FIV testing, and a total T4 are indicated to determine whether the GI signs are primary or secondary to an extra-gastrointestinal disease. Abnormalities on the CBC may include anemia, leukocytosis or leukopenia, eosinophilia (hypereosinophilic syndrome, eosinophilic gastroenteritis). Abnormalities on the biochemical profile may include hyperproteinemia (chronic inflammation), hypoproteinemia (protein loss in the GI tract, less common than in dogs), increased serum alanine aminotransferase (ALT) (Lymphoma> IBD), increased alkaline phosphatase (ALP) and/or gamma-glutamyl transferase (GGT) activity (cholestatic diseases, lipidosis)...

In this first approach, it is important to exclude the presence of gastro-intestinal parasites. A fecal flotation for parasitic ova, and a direct smear of saline admixed fresh feces for protozoa should be performed if possible. If a specific parasite is identified, an adequate anthelminthic should be administered. Even with a negative result, a therapeutic trial using wide-range anthelmintics is a valid alternative (fenbendazole 50mg/kg SID PO 3-5 days) and should eliminate most GI helminths and protozoa.

Tritrichomonas foetus infection is a newly emerging disease in cats particularly in high density populations of young purebred cats. T. foetus is a single-celled, flagellated protozoal parasite that colonizes the feline colon and distal ileum. The most frequent clinical sign of T.foetus infection is chronic large bowel diarrhea occasionnaly with mucus or fresh blood. Some cats do not show any clinical signs. Examination of a direct fecal smear (carefully distinguish T.foetus from Giardia spp. trophozoites), examination of fecal culture (InPouch TF media), Polymerase chain reaction using DNA extracted from feces are the most commonly used diagnostic methods for T.foetus infection in cats. The Tritrichomonas fecal PCR test is highly sensitive and specific.

After exclusion of parasitic causes, food-related problems probably remain the most frequent cause of chronic digestive disease.

Food hypersensitivity. In a recent study of 55 cats with chronic idiopathic gastrointestinal problems (diarrhea and/or vomiting for > 2 weeks), 29% of cats were diagnosed with food sensitivity based on dietary elimination/challenge studies. Another 20% of cats had resolution of clinical signs on the elimination diet but did not relapse after challenge with their original diet. The food or food ingredients responsible for the clinical signs were dietary staples (e.g., beef, wheat, and corn gluten). Fifty percent of affected cats were sensitive to more than one food ingredient. It is therefore strongly recommended to initiate an elimination trial using a novel protein or hydrolyzed peptide diet before contemplating more invasive diagnostic procedures in cats with chronic digestive signs. Most cats respond at least partially to dietary elimination within days. In consequence, if the patient does not improve within 5 to 7 days, additional diagnostics or treatment should be considered.
Second step

In cats presenting with chronic digestive disease and systemic signs such as severe lethargy, rapid weight loss, cachexia, ascites and/or in cats which are not responding to the treatments cited above, a more aggressive approach should be attempted. This consists in additional laboratory testing (serum cobalamin, folates, fTLLI (feline trypsin-like immunoreactivity to rule out EPI), fPLI (feline pancreatic lipase immunoreactivity to check for pancreatitis, serum bile acids (to rule out liver disease).

Abdominal radiographs are generally not very sensitive in ruling out conditions such as gastrointestinal infiltrative diseases, and pancreatic or hepatic disease. An abdominal ultrasound is often preferable and can reveal abnormalities in the gastrointestinal wall (poor gastric or intestinal wall layering, focal or diffuse thickening), abnormal mesenteric lymph nodes, signs of extrahepatic or intrahepatic cholestasis. However, the diagnostic sensitivity of abdominal ultrasonography in pancreatic disease, and for differential diagnosis of IBD and lymphoma remains disappointing. Ultrasound guided needle aspiration is used to sample peritoneal fluid and is also useful for non-invasive sampling of enlarged abdominal lymph nodes or parenchymal abnormalities of abdominal organs.

Nevertheless, in many cases, these non invasive techniques do not permit a definitive diagnosis and it will be necessary to undertake more invasive examinations such as histologic analysis of digestive biopsies.

Last step

Endoscopic or surgical biopsies ? Endoscopy is a minimally invasive method for obtaining mucosal biopsies of the stomach, duodenum, ileum and colon. However, the inaccessibility of certain parts of the digestive tract and the lack of depth of endoscopic biopsies are important limitations that may be avoided when sampling full thickness digestive biopsies using a surgical approach. This is especially interesting in cats for differential diagnosis between severe inflammatory bowel disease and gastro-intestinal lymphoma, and when liver and pancreatic biopsies are needed. Nevertheless, endoscopy should be preferred in order to obtain mucosal biopsies in a cat with suspect gastric or large intestinal disease. Finally, celiotomy is more invasive and less suited for severely debilitated patients.

IBD is an important cause of chronic vomiting and diarrhea in cats. IBD actually represents a group of chronic gastrointestinal disorders which are characterized by an increase in the number of inflammatory cells in the lamina propria of the stomach and/or intestinal tract. The exact pathogenesis of feline IBD is not known, however abnormal interactions of the immune system with the intestinal flora seem to play a key role. IBD is an important cause of chronic vomiting and diarrhea in cats. Intestinal mucosal histopathology is required for a definitive diagnosis of IBD.

Histology. A classification system has been developed by the WSAVA GI standardization group in an attempt to homogenize histopathologic evaluations. However, evaluation of histologic changes in the digestive tract remains highly subjective in spite of this attempt for uniformity. The severity of histologic lesions does not correlate with the prognosis and is not suited to follow the evolution of the disease. Repeated biopsies are therefore usually not recommended, unless evidence of progression of neoplastic disease is suspected. Finally, in some cases, only immunohistochemistry will be necessary to distinguish between lymphoma from a benign immunoproliferative syndrome (IBD).

Etiology of chronic vomiting and diarrhea in cats

1-parasites (helminths)
2-viral disease (coronavirus, FeLV, FIV)
3-Bacteria (salmonella, Campylobacter)
4-Protozoa (Giardia, Tritrichomonas)
5-Dietary (food intolerance, food allergy)
6-Neoplasia (lymphoma, adenocarcinoma)
7-Inflammatory diseases : inflammatory Bowel Disease (IBD), cholangitis, chronic pancreatitis
8-Endocrinopathies (hyperthyroidism, diabetes mellitus, hypoadrenocorticism (rare))
9-Systemic diseases (kidney failure)
10-Motility disorders

REFERENCES


