HAIRBALLS ARE NOT NORMAL: A PRACTICAL APPROACH TO THE VOMITING CAT

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Clients and veterinarians often consider that vomiting in cats is a regular occurrence that is not significant of health problems. This is a particularly common assumption with regard to vomit containing hairballs. Cats spend approximately 25% of their waking hours grooming (Panaman et al, 1981). The majority of ingested hair passes through the cat's digestive tract into the feces with no negative side effects (Panaman et al, 1981). Cats that vomit occasionally may not be considered to have any specific underlying gastrointestinal disease (GID). However, cats that are vomiting more often than every 2 weeks are significantly more likely to have some baseline underlying GID (Norsworthy et al, 2015).

During routine preventive care examinations, detailed questioning about diet, diet changes, vomiting and hairballs is essential. When clients are uncertain about vomiting and/or hairball frequency, a calendar recording system should be recommended. In addition to regular vomiting, the patient may be showing signs of nausea that are not obvious to the client. These signs might include a finicky appetite, occasional loss of appetite or periods of anorexia, licking of the lips, gagging, and/or ingestion of grass to stimulate vomiting.

A history of abnormal bowel movements should also be investigated. Diarrhea can occur in conjunction with upper GID, or as a manifestation of lower GID. The veterinarian should also carefully question the client to identify evidence of constipation. Conditions such as inflammatory bowel disease (IBD) can exist as a problem within the small intestine, combined small intestine/large intestine or solely the large intestine. Vomiting, diarrhea and/or constipation may manifest as a result.

A thorough physical examination of the vomiting cat will help elucidate signs of nausea. The patient should be observed for signs of lip licking and frequent swallowing. A thorough oral health examination may reveal foreign objects looped under the tongue, oral ulceration or other oral or dental disease that may impact appetite and vomiting.
Feline patient weights should be recorded on every visit to the clinic, as subtle weight loss can be one of the first signs of disease. The documentation of weight loss in a cat with frequent vomiting may be the only physical examination change noted. This change can be a hallmark of mild to significant GID.

The abdomen should be examined in quadrants and the patient carefully observed for evidence of nausea or pain during palpation of each quadrant. Evidence of pain during abdominal palpation may include very subtle changes. The patient's face should be monitored closely for evidence of lip licking, wincing, blinking or other

facial expression changes that could indicate pain. The patient may growl or hiss, although this is rare. Guarding of the abdomen during palpation of the painful quadrant(s) may also be observed. Abnormal findings during the palpation may include evidence of an enlarged liver, distended stomach, thickened/ropy intestines, abdominal fluid, masses and/or enlarged lymph nodes.

Making a Diagnosis

The list of differential diagnoses in the adult and senior feline patient with chronic vomiting is long and complex. In all cases, a minimum database (MDB) plus a gastrointestinal (GI) profile is ideal for diagnostic testing. The GI profile should include cobalamin (B12), folate, feline specific pancreatic lipase (sfPL) & in some cases, trypsin-like immunoreactivity (TLI)

The patient's feline leukemia virus (FelV) and feline immunodeficiency virus (FIV) status should be determined. Feline leukemia virus is a known cause of lymphoma in the feline patient. However, with the introduction of vaccination against FelV, there has been a shift in the types of intestinal lymphoma in cats (Cotter et al, 2011; Louwerens et al, 2005). This shift does not change the value of knowing the patient's retroviral status, as disease management will be impacted by retrovirus infection.

Radiography is beneficial in elimination of some differential diagnoses in the vomiting cat. In older cats, the presence of neoplastic lesions within the thorax may be the only identifiable source of vomiting. Abdominal radiographs will be beneficial in identifying some foreign bodies, masses, intestinal accidents, and other changes. Evaluation of skeletal structures may indicate the presence of painful spondylosis, osteoarthritis and/or degenerative joint disease.

Ultrasonographic imaging is beneficial in identifying GI organ abnormalities (liver, gall bladder, spleen, pancreas) as well as the urinary tract. The intestines can be evaluated for abnormal gut motility, obstruction, or other intestinal accidents (ex. intussusception). The abdomen can be evaluated for a discrete mass or masses, including evidence of lymph node enlargement. Evaluation of intestinal wall thickness, as well as thickness and integrity of the four intestinal wall layers may help identify the presence of intramural disease such as IBD and lymphoma. Ultrasound changes associated with pancreatitis may be evident (Forman et al, 2004). The sensitivity of ultrasound in the diagnosis of pancreatitis is low (Cosford et al, 2010; Forman et al, 2004; Gerhardt et al, 2001).
Where clinical signs and laboratory studies are strongly indicative of disease such as IBD, lymphoma (diffuse neoplasia), discrete neoplasia, hepatitis, cholangitis, cholangiohepatitis and/or pancreatitis, biopsy is warranted. The decision to pursue endoscopy versus full abdominal exploratory may be impacted by the findings, the relative invasiveness of each procedure and cost. Exploratory surgery permits full visual assessment of all intra abdominal organs, biopsy of extra-intestinal tissues (liver,

pancreas, lymph nodes etc) and full thickness intestinal biopsy (Kleinschmidt et al, 2010).

Symptomatic, Targeted and Empirical Therapies

Dietary changes may be beneficial to the patient with GID. Changing dietary format, such as dry to canned food, may improve digestion. The use of veterinary formulations that are easy to digest such as Royal Canin Gastro, Hill's i/d or PVD EN may reduce or in some cases eliminate active GID signs. The role of dietary allergens in IBD and other GID is difficult to confirm. Food-responsive enteropathy is characterized by signs similar to other GID, although large bowel signs are more often observed and cutaneous disease may also be present. (Jergens et al, 2012).
Anti-emetics may be beneficial to the vomiting patient. Drugs which also have prokinetic effects should be used with caution in case of obstruction. Gastric acid blockers such as ranitidine and omeprazole are less likely to play a beneficial role in feline patients with GID.
Appetite stimulants for loss of appetite or anorexia may be beneficial in improving intake, but in the presence of nausea and GI inflammation, these drugs are likely to be of little utility until underlying disease is addressed.

Patients with GID may be experiencing pain as a result of or concurrent to their GID. As the signs of pain in the feline patient can be subtle at best, any conditions identified as potentially painful should be treated as such. Gabapentin, buprenorphine and non-steroidal anti-inflammatories are all beneficial in pain management. Multimodal analgesic protocols are most effective over single drug therapy.

It has been recommended that all cats with signs of GID and a serum cobalamin of <300ng/L should receive parenteral supplementation of cobalamin (Ruaux et al, 2005). The current supplementation dosage recommendations from Texas A&M University (TAMU) are 250 micrograms cobalamin SQ once weekly for 6 weeks followed by 250 micrograms SQ monthly long-term. Repeat measurements of B12 are recommended after the first monthly dose (http://vetmed.tamu.edu/gilab/research/cobalamin-information).
The empirical use of steroids is generally not recommended in any situation in feline medicine, however, this is a frequently used therapeutic in feline GID patients. Limitations of finances and client willingness to pursue diagnostic biopsy may impact the treatment selection process. Empirical steroid usage precludes or limits usefulness of ultrasound or biopsy, as the drugs will change the local inflammatory pattern, thus confounding diagnosis. Where steroids are to be employed, urine culture should be considered prior to drug initiation, in order to rule out occult UTI. Prednisolone or dexamethasone are the steroids of choice in cases of IBD or GI lymphoma. The author does not recommend the use of depot steroids such as methylprednisolone acetate. The usefulness of budesonide is questionable, although it may offer benefits as an adjunct therapy. Empirical use of cyclosporine or chlorambucil is not recommended.

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