

Approach to the Vomiting Cat: Causes, Treatment, & Management

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Introduction

The focus of this lecture hour will be on understanding how prevalent, concerning, and important chronic vomiting is in our feline patient population. This condition is defined as vomiting that lasts 2 weeks or greater in duration and does not respond adequately to symptomatic therapy.¹⁻² Amongst feline patients it is reported as a very common problem, with estimates of prevalence reaching nearly 5% of all cats in one study involving 8000 cats presenting to primary care clinics.¹ In addition to the high prevalence of this clinical problem in the feline population presenting to primary care clinics, what is additionally concerning is the fact that vomiting is considered 'normal' cat behavior by many and the 5% estimate may be underestimating the true prevalence within the general population. This is the result of this myth of 'normal vomiting' in the cat being perpetuated by many sources, including many sites on the internet, all with no evidence to support this claim that vomiting is normal. Thus, as clinicians interacting with clients and feline patients, it is imperative to be aware of the high prevalence of this problem and screen every feline patient for its presence.

If you ask many owners about their cat 'periodically vomiting' you will hear that they are not bothered by it or simply that they feel it's a normal amount of vomiting for a cat. This is a very hard perception of normalcy to break down in people's mind once it is engrained. However, it is important to remember that vomiting is a 3-phase physiologic response to irritation or insult to the stomach and proximal small intestine. In other words, it does not occur under normal circumstances and is occurring in response to something with the end conclusion being that if vomiting is reported in a patient, it is a clinical problem. Phase one of vomiting in the cat is typically denoted by signs of nausea, phase two is characterized by retching, and the final phase involves coordinated contractions between the abdominal muscles, stomach, and diaphragm with simultaneous relaxation of the lower esophageal sphincter to allow for the expulsion of gastric contents.² This is a neurologically mediated reflex after stimulation of the emetic center by various inputs.¹ Of particular interest is that the domestic cat lacks a well-defined emetic center, and the neurons involved in this process are distributed more diffusely throughout the central nervous system, once again another attribute separating this species in a novel manner.³ This unique anatomy affects how central and peripheral stimuli for vomiting are conveyed and may dictate a species effect of some anti-emetic therapies (ex. metoclopramide).

For the above reasons, it is prudent to inquire about vomiting behaviors in all feline patients regardless of reason for presentation to the clinic. During this historical interview with the client, in addition to normal, comprehensive historical questions, special emphasis should be put on educating the client that 'normal vomiting' is not a normal behavior in cats! If vomiting is reported, it should be first differentiated from regurgitation. Although an uncommon problem in the feline species, regurgitation can be confused with vomiting by the owner.⁴ Once vomiting has been confirmed as a primary problem, specific questioning should be directed at the frequency, duration and severity of vomiting, as well as concurrent clinical signs, the contents of the vomitus, and the overall status/health of the patient. This should dovetail nicely with the physical examination which may range from unremarkable findings to in some cases where it may indicate a specific cause of the vomiting (ex. thyroid slip). Based on this initial clinical information, you can then consider the gastrointestinal and non-gastrointestinal causes of vomiting and order them in terms of what is most likely for that patient. A general list of differentials and categories for disease for feline vomiting are outlined in Table 1:

Gastrointestinal Differentials	Non-Gastrointestinal Differentials
Inflammatory (IBD, Food Intolerance, Food Allergy)	Hepatobiliary Disease (Cholangitis, Cholangiohepatitis, Hepatitis)
Neoplasia (Lymphoma, etc..)	Pancreatic Disease (Pancreatitis, EPI)
Structural Disease (Foreign Body, Ulcerations, Strictures, etc.)	Endocrinopathies (Hyperthyroidism)
Anomalous Disease (IBS/FIC, Eosinophilic Sclerosing Fibroplasia)	Renal Disease (Uremia)

Functional Disease (Motility Disorders)	Neurologic Disease
Infectious Disease Parasitic (<i>Ollulanus tricuspis</i> , <i>Physaloptera</i> , <i>Ancylostoma tubaeforme</i> , <i>Toxocara cati</i> , <i>Toxascaris leonine</i>) Bacterial (<i>Helicobacter</i> spp.) Viral (FIP, FIV, FeLV) Fungal (<i>Pythium insidiosum</i> , <i>Histoplasma</i> <i>capsulatum</i>) Protozoal (<i>Toxoplasma gondii</i>)	Heartworm Disease

In each individual patient, there must be a recommendation to investigate the underlying cause of vomiting. The recommendation on how aggressively to pursue this work-up in each individual patient will vary, and be dependent on both the client's goals as well as the overall health status of the patient (severity of vomiting, frequency of vomiting, concurrent clinical signs, etc...). This once again emphasizing the importance that this patient specific information is acquired during the history and physical examination. From this information, a recommendation can be made and the client can then decide what the best approach/decision is for their individual animal.

In general, the traditional work-up includes a minimum database (complete blood count), biochemistry profile, urinalysis), T4 (for cats 7 years of age or older), fecal floatation, and abdominal imaging (abdominal radiographs and/or ultrasound). However, each of these diagnostics have greater or lesser importance depending on the individual patient. For example, the older the cat, the more likely a biochemistry profile, T4 and abdominal ultrasound are to provide useful information. In contrast, there is an argument that could be made that fecal floatation, infectious disease testing and abdominal radiographs are most important in young patients. The most important consideration, in every case, still being the individual patient, as these are general rules based on general population dynamics. In individual situations, they all have the potential to be very useful or in others rarely provide diagnostic information. Advance diagnostics including *Tritrichomonas fetus* testing, other targeted infectious disease testing, gastrointestinal panels (Cobalamin, Folate, PLI, TLI), fine needle aspiration, and/or histopathology should be performed following the initial diagnostics. Rarely are fecal cultures, direct fecal smears, and fecal PCR panels indicated during routine diagnostic work-ups.

In the lecture portion, we will discuss how to incorporate this clinical information into making the best, targeted diagnostic plan and empirical, therapeutic plan. The ultimate goal being a comprehensive review on identifying our secret feline vomiters as well as understanding the best approach diagnostically and therapeutically in a patient specific context.

References:

1. Vapalahti K, et al. Health and behavioral survey of over 8000 Finnish cats. *Front Vet Sci*. 2016 3:1-16.
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4. Frowde PE, Battersby IA, Whitley NT, et al. Oesophageal disease in 33 cats. *J Feline Med Surg* 2011;13:564–569.

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