

# Hairballs: Hairy Nuisance or a Sign of Disease?

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Hairballs typically present as a tubular wad of tightly or loosely packed ingested hair. Clients may use the term hairballs to describe loose strands of hair in vomitus containing clear or coloured liquid or strands of hair within regurgitated or vomited food. They may report that their cat extends his/her neck and appears to cough before dispelling the hairball +/- liquid. This behavior may, in fact, be a sign associated with small airway disease/"asthma". It is therefore important to determine exactly what the client is witnessing before determining what diagnostic and therapeutic approach to take. In the extreme situation, a true trichobezoar, which is a hard concretion consisting of hair, lodged in the esophagus of stomach, is too large to vomit or to pass through the pylorus and intestines.

Cats routinely ingest small amounts of hair through grooming; this normally passes in the feces. When this process is disrupted either due to increased ingestion or abnormal passage of hair (i.e., changes in gastrointestinal motility), hairballs ensue. It is therefore important to try to identify and treat the underlying cause of the hairball rather than just its resulting effect. Psychogenic or behavioural causes should also be considered. Empirical treatment While there are numerous therapeutic recommendations and commercial diets to reduce the frequency of vomiting hairballs, the underlying cause should always be addressed.

## Hydration

- Optimizing hydration by utilizing moist food, adding water to meals, and administering subcutaneous fluids will help to normal cellular and neuromuscular function thereby improving gastrointestinal (GI) motility.

## Hairball remedies

- These consist of malt-flavoured petroleum with or without added vitamins. These products can be used copiously (1/3 tube) in the short term and daily or intermittently at maintenance doses (2-5 cm/day) long term.
- Treats and diets containing beet pulp and other fibers may help to normalize intestinal motility.

## Remove excessive loose hair to prevent hairball formation

- Combing and brushing may help, however there is often a superficial layer of loose hair left behind that the cat will swallow when completing the job. Wiping with a damp paper towel helps to remove these fine fibers. Comb/brushes such as the Furminator® will reduce the quantity of hair but must be used cautiously to avoid removing too much fur.

## Ensure that medications do not get stuck in the esophagus

- Drugs such as oral clindamycin and doxycycline pills/capsules can cause irritation and may result in oesophageal strictures. It is prudent to flush any oral medication not in a liquid formulation with a 3-6 ml water chaser.

## Diagnosis and treatment of underlying cause

### Oesophageal diseases

- Radiographs should be taken. Displaced viscera may be seen suggesting a congenital problem or previous trauma; megaesophagus may be seen. A contrast imaging study (barium meal) can be used to identify oesophagitis (abnormal striations), a stricture or a foreign body, such as a hairball within the oesophagus or stomach.
- Endoscopic evaluation may be indicated to look for a stricture, to biopsy a mass or to remove a foreign body. Fluoroscopy may be required to study a dynamic process such as a sliding hiatal hernia.
- Treatment will depend on the condition discovered. Correction or alleviation of the underlying problem will result in a reduction or cure of the hairball problem.
- Medical therapy for oesophagitis includes reduction of exposure to acid using an H<sub>2</sub> antagonist (e.g., famotidine: 5 mg PO q24h) or proton pump inhibitor (e.g., omeprazole: 1.0 mg/kg PO q24h). Sulcralfate (0.25g PO q8-12h) may help coat the denuded mucosa and must be given 20-30 minutes before reducing acid levels. Analgesia should be considered; gastrostomy tube feeding may be necessary in severe cases.
- Oesophageal strictures may require balloon dilation to break down fibrosis.
- Medications should be in liquid format if given orally to avoid causing or exacerbating oesophagitis.

### Gastric and intestinal diseases

- Radiography, ultrasound and endoscopy may be performed non-invasively. Ultrasound has the advantage of assessing motility.
- Gastric foreign bodies (including trichobezoars) will require surgical removal.

- Biopsies may be required (laparotomy or endoscopy) to determine the cause of reduced motility or ileus.
- Fecal examination or routine use of a broad-spectrum anthelmintic is recommended.

#### **Pancreatic disease**

- Ultrasound in combination with serum fPLI is the least invasive way to diagnose pancreatitis.
- General treatment of pancreatitis consists of providing analgesia, fluid therapy and ensuring that the patient receives adequate amounts of balanced diet.

#### **Biliary tree disease**

- Radiography may reveal an opacity in the region of the gall bladder. Ultrasound of the biliary tree will confirm the presence of choleliths and will also reveal any sludge and/or cholecystitis.
- Aspiration of bile for cytology and culture may be performed under ultrasound guidance. Bile cytology may show infection and/or inflammation. Antibiotics should be chosen according to the results of sensitivity testing, however when finances are a limiting factor, use of metronidazole for anaerobic bacteria along with a fluoroquinolone for gram positive and negative aerobes should be considered.

#### **Lower urinary tract disease**

- Urinalysis will be helpful by revealing whether or not infection, inflammation, idiopathic disease or crystals are present.

#### **Dermatologic diseases**

- Over-grooming may be generalized rather than restricted to one region when skin is the affected organ. When ectoparasites, mites, and dermatophytes are not seen, after flea treatment has been performed, skin biopsies (to detect allergy) may be warranted.

#### **Degenerative joint disease and spondylosis deformans**

- Asking appropriate questions regarding mobility, jumping and climbing (both up and down) as well as overall energy may suggest the presence of degenerative skeletal diseases (DSD). Radiographs may be taken to identify affected joints although radiographic findings do not always correlate with clinical findings and normal radiographs cannot rule out the presence of DSD. Disease modifying agents such as glucosamine/chondroitin sulfate and therapeutic diets in conjunction with appropriately used NSAIDs and other analgesic agents is indicated.

#### **Psychogenic distress and behavioural considerations**

- Cats may express over-grooming as a way to self-soothe when stressed. This stress may be social (associated with other individuals [human, cat, dog, etc.] in the home), frustration (a change in or loss of routines) or environmental (inadequate opportunities to express normal cat-appropriate behaviours). Individuals with compulsive/obsessive temperaments will start to over-groom and then be unable to stop the behaviour once it is initiated. They may restrict excessive grooming to just one region (e.g., the fore limbs or ventral abdomen) or may generalize the behaviour.
- Evaluate the household structure and routine as well as the presence and placement of resources (perches, hiding places, feeding stations, water stations and latrines).
- Antianxiety therapy (pheromones, diet, drugs) may be recommended.

#### **Recommended reading**

Cannon M. Hair Balls in Cats: A normal nuisance or a sign that something is wrong? *J Fel Med Surg* (2013) 15, 21–29  
 Scherk M. Diagnosing the Cause of Hairballs in Cats. *NAVC Clinician's Brief* September (2012) 20-21.