Feline inflammatory bowel disease – dietary and medical management

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While the initiating cause of feline inflammatory bowel disease (IBD) is rarely identified, dietary antigens are thought to be an important and underlying cause in some patients. As well, a breakdown in the normal mucosal immune protection allows food antigens that would not normally cross the mucosa to do so and then become a part of the inflammatory process even when they are not the initiating cause.

Treatment of IBD in cats usually involves a combination of dietary modification and anti-inflammatory and immunomodulatory therapy.

Dietary Management
Key dietary factors that are important when treating feline IBD patients are digestibility, fat and fibre content.

Digestibility of any food is determined by the quantity and quality of the three main nutrients in food – carbohydrate, fat and protein. Processing (e.g. cooking and milling) can enhance digestibility and subsequent food utilization. Increasing digestibility means enhanced utilization and absorption of food. Less undigested ingesta in the small bowel reduces the likelihood of osmotic diarrhea.

Fatty acids that reach the colon are hydroxylated by colonic bacteria and can contribute to diarrhea. To minimize the undigested fats reaching the colon a low fat diet has traditionally been recommended for cats with diarrhea. Low fat diets have the disadvantages of reduced palatability and lower caloric density requiring a greater volume to be eaten to satisfy caloric need. Both can be problematic in a feline patient with poor appetite. However, a recent randomized trial investigated 60 cats with chronic non-specific diarrhea. They were fed either a high fat diet (23.2% DMB) or low fat diet (10.5% DMB). Over a six week period dietary fat had no effect on the faecal scores of any patients, suggesting that the percentage of dietary fat is not as important in feline patients with chronic diarrhea as had previously been suggested.

Fibre is the undigestable carbohydrate component of food. Fibre binds water, affects nutrient absorption and can influence gastrointestinal motility and modify clinical signs. Soluble fibre can bind water and is fermentable by colonic bacteria. Short chain fatty acids (SCFA) are one of the products of bacterial fermentation of soluble fibre and these can promote colonocyte viability. Increasing fibre in the diet results in improved stool quality and reduced clinical signs in some patients with IBD, in particular those with predominantly large bowel signs.

Adverse food reactions can be either the result of food intolerance or food allergy. Food intolerance is a non-immunologic reaction to food or food additives. Because cats have a low level of intestinal disaccharide activity, intolerance to ingested disaccharides (e.g
lactose) is a possible cause of secondary diarrhea in feline patients with abnormal intestines.

Food allergy, which is less common, is an immunological reaction to a food or food additive. There are only a small number of studies documenting food allergy in cats and the most common allergens reported are beef, dairy and fish products. In cases where food allergy is suspected, a therapeutic trial with either a novel protein diet (i.e. new to the patient) or a hydrolysed protein diet is indicated. A hydrolysed protein diet is superior as a hypoallergenic diet as the protein has been hydrolysed into fragments that are less than 10,000 daltons and therefore escape recognition by the immune system. In addition, such diets are highly digestible, which is advantageous for patients with IBD. Commercial diets are recommended over home prepared diets, which are extremely difficult to formulate to provide complete and balanced nutrition. Any food elimination trial should continue for 8-12 weeks and unbalanced home cooked diets fed to cats for this length of time are potentially harmful.

Food aversion can develop when inappetent cats are left in a confined space with unwanted food making it difficult to get them to accept that food again even after their appetite has improved. One way to avoid this is to withhold unfamiliar diets for the first few days in hospitalized patients until their appetite has improved.

In mild cases of IBD dietary modification alone may be all that is required but in most cases, anti-inflammatory, immunosuppressive or immunomodulatory drugs will be required as well. In the early stages of management, severe cases may also require some degree of supportive care such as intravenous fluids and correction of electrolyte and acid base disturbances. Cats with severe debilitation or complete anorexia may require nutritional support via enteral tube feeding. The details of these therapies are not discussed here.

**Drugs**

**Prednisolone**, used to reduce enteric inflammation, is the mainstay of most therapeutic regimens for feline IBD. Cats seem more glucocorticoid tolerant than dogs and are less likely to have side effects of high and prolonged doses of glucocorticoids. The dose is started high (1-2mg/kg PO bid), maintained until clinical signs resolve (2-8 weeks), and then decreased slowly over a total minimum course of 4-6months. After each reduction in prednisolone dose the cat’s appetite and weight should be assessed and the owner questioned carefully about any regression in stool quality or recurrence of gastrointestinal signs.

**Metronidazole** (10-15mg/kg PO bid) in addition to the prednisolone is beneficial in some cats.

An alternative glucocorticoid is **budesonide** (1mg/cat PO sid). In cats that are impossible to give oral medication to, injectable depot methylprednisolone acetate (20mg/cat SC q 2-4 weeks) can be used.

**Chlorambucil** (1-2mg/cat PO every second day) can be used either in conjunction with prednisolone in severe IBD cases or as an alternative to prednisolone in cases where the clinical signs are hard to control as prednisolone doses are tapered. As with
prednisolone, the dose of chlorambucil should be tapered after 2-4 weeks to the lowest effective dose.

Parenteral cobalamin (B12) supplementation at 250 ug given SC or IM every week for 4 weeks then every two weeks has been recommended in cases with a low serum cobalamin level. Clinical signs of IBD may not resolve if low cobalamin levels remain uncorrected.

References
*All dose rates have been taken from Plumb’s Veterinary Drug Handbook 5th Edition