

FELINE URINARY TRACT DISEASES

PREVENTION AND TREATMENT WITH NUTRITIONAL MANAGEMENT

By Kim Thornton

Veterinarians at the Minnesota Urolith Center, part of the University of Minnesota College of Veterinary Medicine, conduct cutting-edge research on urinary diseases in animals. Carl Osborne, DVM, PhD, DACVIM, who founded the center in 1981, is a leader in the analysis, prevention, and treatment of urinary disorders, including the ones most commonly seen in cats: uroliths and idiopathic feline lower urinary tract disease (FLUTD). His insights shed light on the role pet food plays in managing these cases.

Clinical signs of uroliths

Cats can develop microscopic crystals in the urine. If the urinary tract retains these crystals, the crystals can grow into urinary stones (also known as uroliths) and urethral plugs, which can eventually obstruct the urinary tract—and urine flow. Generally, cats with uroliths exhibit:

- dysuria
- hematuria
- polyuria
- pollakiuria.

Each sign (or combination of signs) may have a different cause, so the diagnostic steps outlined below are essential.

Preventing and treating uroliths

Although immediate and effective, surgery does not resolve the underlying causes or diminish the high recurrence rate, Dr. Osborne says, nor does it guarantee that the veterinarian will remove all of the uroliths. It also comes with anesthesia risks and postoperative pain. If it's possible, Dr. Osborne recommends the following steps:

1. Evaluate the urinary tract by performing a complete urinalysis and a radiography and/or ultrasonography. These diagnostic tests are critical elements for treating and preventing the underlying causes of urolith formation. Why? "Uroliths can contain different types of minerals that result from fundamentally different causes, so veterinarians must properly identify the mineral composition of the entire urolith," Dr. Osborne says. In addition, the imaging techniques can help locate the site of the problem.

2. Recommend a pet food that is formulated to reduce mineral concentrations in the urine. Empirical evidence from clinical experience suggests that two dietary-management methods are particularly effective: feeding canned pet food to increase urine volume and feeding pet foods that minimize struvite crystal formation.

However, cats can also develop calcium oxalate uroliths, which Dr. Osborne says are tougher to control. Although pet foods can't dissolve these types of uroliths, some are designed

to control risk factors so veterinarians can minimize the rate of urolith growth or recurrence.

To help, Hill's Pet Nutrition, Inc. is pleased to unveil Hill's® Prescription Diet® c/d® Multicare Feline. This new pet food is the combination of two proven formulas: Hill's® Prescription Diet® c/d® Feline and x/d® Feline. The pet food is clinically proven to maintain urine saturation levels that minimize the risk of calcium oxalate crystal growth. It contains omega-3 fatty acids from fish oil to help break the cycle of inflammation in cats with idiopathic FLUTD. It also contains antioxidants as well as added citrate to inhibit uroliths.

In addition, Prescription Diet c/d Multicare Feline contains healthy sodium levels to help avoid the potential risk of aggravating undiagnosed kidney disease,¹ and cats can eat the food for long periods because it's nutritionally balanced.

Reference

1. Kirk CA, Jewell DE, Lowry SR. Effects of sodium chloride on selected parameters in cats. *Vet Therapeutics* 2006;7:333-346.

Case study: Idiopathic FLUTD

Dr. Osborne emphasizes that idiopathic FLUTD is often a self-limiting condition that frequently resolves without treatment. The following is a typical idiopathic case:

History

A 3-year-old spayed female domestic shorthaired cat was presented to the Minnesota Urolith Center for recurring episodes of hematuria and dysuria during a one-year period. Although a urinalysis found hematuria and proteinuria, the results of a physical examination and other evaluations were all normal—no bacteria, uroliths, or neoplasms were present.

Diagnosis

Idiopathic FLUTD

Case management

The clinical signs lasted for about a week and then resolved. Veterinarians followed the case for nearly six years, observing five episodes of self-limiting hematuria and dysuria. The client was given the option of trying a different pet food. "Changing to a therapeutic pet food like Hill's® Prescription Diet® c/d® Multicare could help prevent recurrence, minimize the severity of the clinical signs, or increase the time interval between recurrences," Dr. Osborne says.