

Clinical Evidence Report

Scientific Insights



A First for Feline Idiopathic Cystitis

KEY POINTS:

- Compared with a control food, consistently feeding a therapeutic urinary food (Hill's® Prescription Diet® c/d® Multicare Feline Bladder Health) was associated with a significant reduction in recurrent episodes of feline idiopathic cystitis (FIC) signs during a 12-month study.
- This is the first study to definitively show that foods of different nutritional profiles impact the expression of acute episodes of FIC signs in cats.

A YEAR-LONG PROSPECTIVE, RANDOMIZED, DOUBLE-MASKED STUDY OF NUTRITION ON FELINE IDIOPATHIC CYSTITIS

Kruger JM, Lulich JP, Merrills J, et al. *Proceedings. American College of Veterinary Internal Medicine Forum 2013.*

PURPOSE

To evaluate the efficacy and safety of a therapeutic urinary food, enriched with omega-3 fatty acids (EPA & DHA) and antioxidants, for preventing recurrent episodes of FIC.

DESIGN

Male or female neutered cats with clinical signs of FIC were recruited for the study at Michigan State University and the University of Minnesota. Cats lived indoors and ranged in age from 1-8 years, and were considered for inclusion in the study if they had experienced an acute episode of ≥ 2 lower urinary tract signs (hematuria, dysuria, stranguria, pollakiuria, and/or perirenia) in the past 7 days. A thorough diagnostic evaluation (history, physical examination, CBC, serum chemistries, urinalysis, urine culture, survey abdominal radiography, and/or abdominal ultrasonography) was performed to exclude systemic illnesses and other causes of lower urinary tract disease. Cats were excluded from the study if: they lived in multi-cat households (> 2 cats) and owners could not comply with feeding exclusively the test or control foods; had major organ disease or lower urinary tract disease other than FIC (e.g., uroliths, urinary tract infection); had received antimicrobial therapy within the past 7 days; had recently consumed urolith dissolution foods; or had been treated with any drug or supplement that could potentially affect expression of FIC signs (e.g., antihistamines, antidepressants, anti-inflammatories, glycosaminoglycans, or nutritional supplements).

Owners could choose whether they wanted to offer wet or dry food exclusively and then cats were assigned randomly to either the test or control food groups. Investigators and pet owners were masked to treatment groups for the duration of the 12-month study. The test food was commercially available Hill's® Prescription Diet® c/d® Multicare Feline Bladder Health formula. The control food was formulated to meet or exceed Association of American Feed Control Officials (AAFCO) requirements for adult cats, with mineral concentrations and target urine pH designed to mimic common selling grocery brands. Compared with the test food, the control food contained substantially lower concentrations of antioxidants and omega-3 fatty acids.

The primary endpoint measured was the number of recurrent episodes of FIC signs within 12 months. A recurrent episode of FIC was defined as presence of ≥ 2 clinical signs (hematuria, dysuria, stranguria, pollakiuria, and/or perirenia) on a single day. An episode was considered to have resolved when there were two consecutive days with ≤ 1 clinical sign. Because certain behaviors (e.g., perirenia) may be acquired as a result of lower urinary tract diseases and persist despite resolution of the

underlying disease, this definition of episode resolution was chosen to minimize potential bias of acquired persistent behaviors on outcome assessments. Owners were instructed to return to the veterinary hospital should a recurrence of clinical signs occur and also for scheduled rechecks at 1, 3, 6, 9 and 12 months. Using a standardized report form, owners recorded food consumption, signs of other illnesses, any treatments administered and any environmental changes. They also were asked to maintain a daily log of clinical signs throughout the entire study period. At the end of the 12-month study, cats returned to the veterinary hospital for a physical examination, urinalysis, urine culture, serum chemistries and diagnostic imaging of the lower urinary tract.

RESULTS

A total of 25 cats were included in the study with 11 cats in the test food group and 14 cats in the control food group. There was no statistical difference in recurrence of lower urinary tract signs between the dry and wet formulations, therefore, data from cats in the dry and wet groups were combined and comparisons were made between nutritional profiles (test food vs. control food).

Cats consuming the test food had a significantly lower proportion of total days with ≥ 2 clinical signs and total episodes of FIC signs ($P < 0.05$) with 4/11 (36%) test food group cats and 9/14 (64%) control food group cats exhibiting ≥ 2 clinical signs on at least one occasion during the 12-month study. At least two clinical signs were observed on any particular day 13 times in the test food group and 152 times in the control food group. The rate of recurrent episodes of FIC signs was 5/3904 days [1.28/1000 cat-days] in the test food group and 47/4215 days [11.15/1000 cat-days] in the control food group (Figure 1). This represents an 89% lower rate of recurrent episodes of FIC signs in cats fed the test food (Hill's® Prescription Diet® c/d® Multicare Feline Bladder Health) consistently for 12 months compared with the control food group.

CONCLUSIONS AND CLINICAL RELEVANCE

This is the first study to definitively show that foods of different nutritional profiles impact the expression of acute FIC signs in cats.

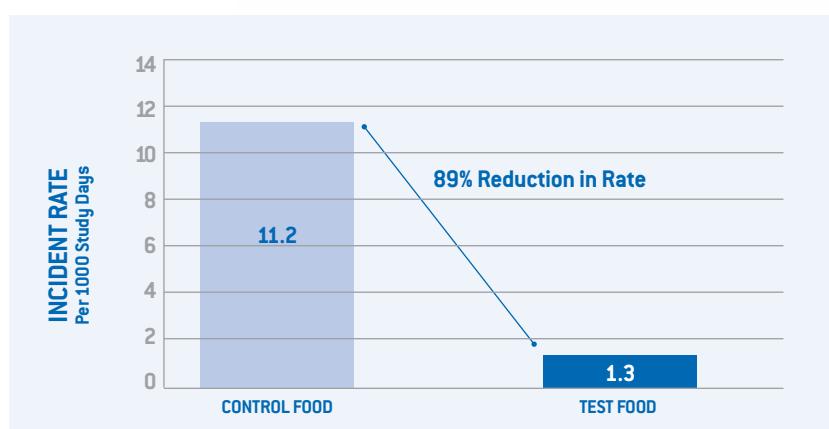


Figure 1. In a 12-month clinical study, cats consistently fed Hill's® Prescription Diet® c/d® Multicare Feline Bladder Health (test food, n=11) had a significantly lower proportion of total days with episodes of FIC signs ($P < 0.05$) compared with cats fed a control food (n=14).

SUMMARY

Investigators determined that consistent feeding of c/d Multicare to cats with FIC resulted in decreased recurrence of episodes of FIC signs during a 12-month randomized, controlled, double-blinded clinical study.

NUTRITIONAL RECOMMENDATION

You can confidently recommend the tested nutrition of c/d Multicare for cats with FIC. For best results, c/d Multicare should be fed consistently as the exclusive food to minimize the long-term risk of recurrent episodes of clinical signs.