

Idiopathic Feline Lower Urinary Tract Disease

David F. Senior, BVSc, DACVIM (SAIM), DECVIM-CA
Professor Emeritus, Louisiana State University

Idiopathic feline lower urinary tract disease (idiopathic FLUTD) is most commonly observed in young and middle-aged cats^{1,2} and is exhibited through repeated signs of lower urinary tract inflammation, including hematuria, pollakiuria, stranguria, dysuria, and periuria.

No diagnostic test can confirm the disease; thus, affected cats are identified via exclusion of the known causes of lower urinary tract inflammation (eg, urinary tract infection, urethral obstruction, urolithiasis, neoplasia, territorial urination behavior).²



The distinction between idiopathic FLUTD and urethral obstruction may be blurred because the former may predispose to the latter. Recent evidence suggests that some affected cats have an aberrant neuro-hormonal response to stress^{3,4}; changes in local bladder eicosanoid metabolism have also been identified.² Current management strategies focus on stress reduction, dietary adjustment, and environmental enrichment.⁵

Diagnostic tests to rule out known causes of FLUTD include urinalysis, urine culture, survey and contrast radiography, abdominal ultrasound, and, in some cases, cystoscopy and bladder biopsy.² The natural history of the disease includes clinical signs that wax and wane for 2 to 3 days; controlled studies to assess the efficacy of various treatments have been challenging. Clinical signs can vary from relatively mild, infrequent occurrences to severe, repeated episodes that cause the patient major discomfort.²

On physical examination, the bladder may be thickened and painful on palpation. Gross or microscopic hematuria in the absence of urinary tract infection is a characteristic finding.^{1,2}

Current management strategies focus on stress reduction, dietary adjustment, and environmental enrichment.

STEP 2
Treatment Plan ►

Tailoring Treatment

David F. Senior, BVSc, DACVIM (SAIM), DECVIM-CA
Professor Emeritus, Louisiana State University

The following represents a comprehensive treatment plan for patients with idiopathic FLUTD, including which team members play a role in each part of treatment.

ENVIRONMENTAL REVIEW AND ENRICHMENT (VETERINARIAN AND VETERINARY TECHNICIAN)⁵⁻⁷:

- Explain to the client the situations that could increase the patient's stress (eg, conflict for space with other animals and children; safe feeding, watering, and absence of littering areas; absence of safe hiding or resting areas; introduction of a new pet; neighborhood dogs; severe weather; family relocation).
- With the client, brainstorm changes that would provide a safe, predictable, enriched environment and make the patient feel in control (eg, separate food and litter box areas for each cat; safe hiding, perching, resting, and playing areas; routine, dedicated play and predatory behavior time). Also, discuss techniques that enhance the quality of play

and provide positive and consistent human–cat interaction time, and address environmental aspects that consider the importance of the cat's sense of smell (eg, warming food to body temperature to increase olfactory stimulation).

DIET (VETERINARIAN AND VETERINARY TECHNICIAN):

- Feed patients canned food. In 2 studies,^{3,5} recurrence of clinical signs was observed less often in cats that were fed canned food than in those fed an otherwise identical dry diet.⁸ However, another study comparing otherwise identical wet and dry food failed to reduce the recurrence of clinical signs of acute idiopathic FLUTD, so this recommendation may not always be beneficial.⁹ That said, feeding canned foods may provide behavioral benefits beyond producing more dilute urine.⁵
- Feed patients diets that assist with formation of urine with low relative supersaturation with respect to struvite and calcium oxalate. Elimination of urolithiasis as a cause of the clinical signs is intrinsic to an

idiopathic FLUTD diagnosis, and it is best to eliminate crystalluria, which often contributes to urethral obstruction.

- Consider methods to increase water consumption (eg, add water to food; adjust water container size; offer bottled or distilled water; use a pet fountain; leave water in the sink, bathtub, or shower with a slow drip; flavor water with low-salt meat or fish broth).^{2,5}
- Feed diets with increased antioxidant and fatty acid levels. In one study, cats fed a diet with the higher levels of these nutrients suffered fewer days with clinical signs of idiopathic FLUTD.⁹

The veterinary team should emphasize to clients that current dietary recommendations are supported by contradictory or minimal studies.

PRESCRIBED MEDICATION (VETERINARIAN):

- If the patient exhibits severe clinical signs, prescribe buprenorphine 20 µg/kg IM, then transmucosal buprenorphine 5-20 µg/kg PO 2 to 4 times a day for 5 days to control pain.¹⁰
- To tranquilize the patient, administer acepromazine 2.5 mg/cat PO as needed.¹¹
- For chronic cases, consider pheromone therapy¹² and/or amitriptyline.¹³

The veterinary team should emphasize to clients that current dietary recommendations are supported by contradictory or minimal studies.

STEP 3
Team Roles ►

Team Roles

Sandy Walsh, RVT, CVPM
PetOps
Wilton, California

RECEPTIONIST

Client communicator

- Listen to client concerns over the phone and ask questions about changes in the patient's behavior (eg, increased litter box use, straining, bloody urine, urine outside the litter box)
- Schedule appointments

TECHNICIAN

Client educator, patient caregiver

- Take the patient's history
- Gather more information about the clinical signs (eg, progression, level and frequency of abnormal urinary behavior)
- Assist the veterinarian with diagnostics, treatment plan development, and treatment initiation
- Communicate with clients throughout the patient's care

VETERINARIAN

Medical expert, client and team educator

- Perform a complete examination
- Perform diagnostics and develop a treatment plan
- Oversee care for hospitalized patients
- Communicate with clients throughout the patient's care

PRACTICE MANAGER

Team and client education facilitator

- Recruit and hire competent team members with the soft skills for communication and the practical skills to provide the necessary patient care and treatment
- Develop phased training programs specific to the positions in the practice
- With the medical team, define protocols and procedures for diagnosing and treating idiopathic FLUTD
- Arrange and oversee specific condition-related training for team members and develop or obtain educational materials for clients

STEP 4
Team Training Plan ►

In-Depth & Continuous Team Learning

Sandy Walsh, RVT, CVPM
PetOps
Wilton, California

Training in all aspects of idiopathic FLUTD is critical. The practice's established patient care models should be developed in advance and clearly documented, as they will set the standard of care. Team members should be fully knowledgeable about the disease signs, diagnostics, treatments, and prevention.



Regular continuing education is important for all team members.

All team members must provide clients with consistent information; in-house team training will help ensure the highest level of consistency. The team must understand the importance of early disease detection and preventive measures (eg, environmental changes, diet changes, medication administration) so that they can communicate them to clients.

Regular continuing education (CE) is important for all team members. Large conferences, local events, and online CE opportunities are some of the best venues to achieve continual team learning.



Read All About It

- Gunn-Moore DA, Shenoy CM. Oral glucosamine and the management of feline idiopathic cystitis. *J Feline Med Surg*. 2004;6(4):219-225.
- Kruger JM, Lulich J, Merrills J, et al. A year-long prospective, randomized, double-masked study of nutrition on feline idiopathic cystitis (FIC). In: Proceedings of American College of Veterinary Internal Medicine Annual Forum. 2013; Seattle, WA.
- Kruger JM, Venta P, Kiupel M, et al. Characterizing urinary bladder eicosanoid metabolism in healthy cats and cats with idiopathic cystitis (FIC). In: Proceedings of American College of Veterinary Internal Medicine Annual Forum. 2015; Denver, CO; 68-69.

STEP 5
Communication Keys ►

Client Communication


Sandy Walsh, RVT, CVPM
PetOps
Wilton, California

Whether delivering or obtaining information or answering client questions, it is important that each team member possess the communication skills necessary to assist each other and clients. This is an important skill set that should be screened for during the hiring process.

Every team member will communicate with the client at some stage of diagnosis, treatment, and case management. Clients may not always understand the disease information, so avoid the “vet speak” whenever possible and communicate in terms they will understand. Share verbal and written information, and confirm client understanding by encouraging them to ask questions. Important discussion topics include:

- Diet changes and restrictions
- Suggestions to encourage litter box use
- Medical progress examinations
- Pain-control options
- Stress-reduction techniques
- Use and importance of medications.

The team must do everything possible to help the client manage the patient’s idiopathic FLUTD, including recognizing the signs, diagnostics, treatment, and prevention. Communi-

cation is key to successful case and client management. 

References

1. Gerber B, Boretta FS, Kley S, et al. Evaluation of clinical signs and causes of lower urinary tract disease in European cats. *J Small Anim Pract.* 2005;46(12):571-577.
2. Westropp JL, Buffington CAT. Lower urinary tract disorders in cats. In: Ettinger SJ, Feldman EC, eds. *Textbook of Veterinary Internal Medicine.* 7th ed. St. Louis, MO: Saunders Elsevier; 2010:2069-2086.
3. Buffington CAT. Idiopathic cystitis in cats—beyond the lower urinary tract. *JVIM.* 2011;25(4):784-796.
4. Westropp JL, Kass PH, Buffington CAT. Evaluation of the effects of stress in cats with idiopathic cystitis. *Am J Vet Res.* 2006;67(4):731-736.
5. Buffington CAT, Westropp JL, Chew DJ, Bolus RR. Clinical evaluation of multimodal environmental modification (MEMO) in the management of cats with idiopathic cystitis. *J Feline Med Surg.* 2006;8(4):261-268.
6. Carney HC, Sadek TP, Curtis TM, et al. AAEP and ISFM guidelines for diagnosing and solving house-soiling behavior in cats. *J Feline Med Surg.* 2014;16(7):579-598.
7. Ellis SLH, Rodan I, Carney HC, et al. AAEP and ISFM feline environmental needs guidelines. *J Feline Med Surg.* 2013;15(3):219-230.
8. Markwell PJ, Buffington CA, Chew DJ, Kendall MS, Harte JG, DiBartola SP. Clinical evaluation of commercially available urinary acidification diets in the management of idiopathic cystitis in cats. *JAVMA.* 1999;214(3):361-365.
9. Kruger M, Lulich J, Merrills J, et al. A prospective randomized double-masked study of nutrition on feline idiopathic cystitis (FIC). In: Proceedings of American College of Veterinary Internal Medicine Annual Forum. 2013; Seattle, WA.
10. Plumb D. Buprenorphine. *Plumb’s Veterinary Drug Handbook.* 8th ed. VIN.com. www.vin.com/9780470959657. Updated January 2015. Accessed August 2015.
11. Plumb D. Acepromazine. *Plumb’s Veterinary Drug Handbook.* 8th ed. VIN.com. www.vin.com/9780470959657. Updated January 2015. Accessed August 2015.
12. Gunn-Moore DA, Cameron ME. A pilot study using synthetic feline facial pheromone for the management of feline idiopathic cystitis. *J Feline Med Surg.* 2004;6(3):133-138.
13. Chew J, Buffington CAT, Kendall MS, DiBartola SP, Woodworth BE. Amitriptyline treatment for severe recurrent idiopathic cystitis in cats. *JAVMA.* 1998;213(9):1282-1286.



Clients may not always understand the disease information, so avoid the “vet speak” whenever possible and communicate in terms they will understand.