

Peer Reviewed



# Stranguria in a Siamese Cat

A previously healthy, 3-year-old, 5-kg, castrated Siamese cat was presented for a 3-day history of stranguria.

## HISTORY

This indoor-only cat, which had been adopted 2 years earlier, was visiting the litter box frequently but only producing a small amount of urine. In addition, he had been grooming and licking his perineal region excessively. His vaccinations were up-to-date. Two dogs also lived in the household.

## CLINICAL PRESENTATION

The cat appeared bright, alert, and responsive with a body condition score of 4/5. His rectal temperature was 103.7°F, heart rate 210 beats/min with strong pulses, and respiratory rate 70 breaths/min. Thoracic auscultation disclosed no abnormalities. Abdominal palpation revealed a small, painful urinary bladder. Swelling and erythema were noted on the prepuce and penis. Digital rectal examination was unremarkable.

## LABORATORY DIAGNOSTICS

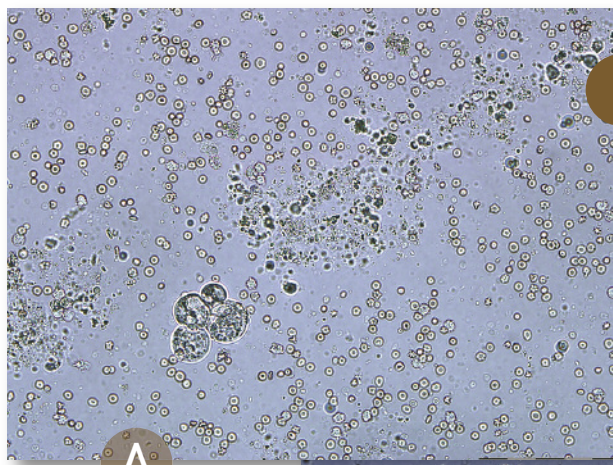
Urinalysis (Table and Figure 1) was conducted on a free-catch urine sample obtained from a clean litter box filled with nonabsorbent substrate. Bacterial culture of a urine sample obtained by cystocentesis was negative after 48 hours. The CBC and serum biochemical panel findings were within reference intervals.

**Table. Relevant Urine Culture Findings**

Parameter	Result	Parameter	Result
Color	Brown	Sediment	
Turbidity	Cloudy	Erythrocytes	>200/hpf
pH	7	Leukocytes	5–10/hpf
Specific gravity	1.038	Epithelial cells	Few/lpf
Blood	3+	Cocci	Few/hpf (40×, 60×)
Protein	3+		

hpf = high-power field, lpf = low-power field

CBC = complete blood count



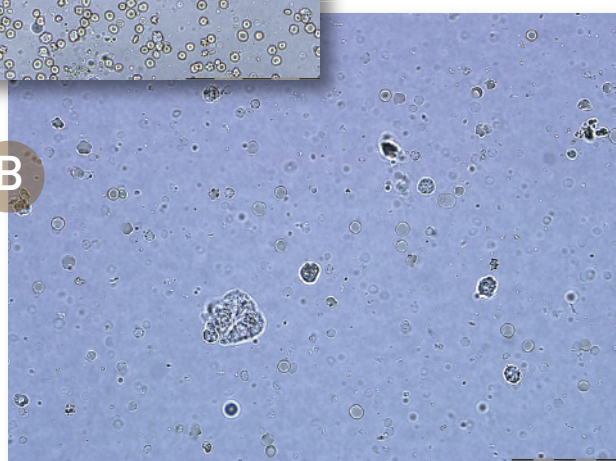
1

Photomicrographs show urine sediment at 40x (A) and 60x (B) magnifications.

Courtesy of Lisa Pohlman, DVM, Diplomate ACVP, and Don Peterson, DVM

A

B



## ? ASK YOURSELF ...

- What diagnostic differentials would you consider for this cat's lower urinary tract signs?
- What additional questions would you ask the owner?
- How significant is the presence of bacteria in the urine sediment?

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Abdominal radiographs (A and B) showed a small urinary bladder with no evidence of radiopaque calculi. There was no renomegaly.

Courtesy of Laura Armbrust, DVM, Diplomate ACVR, and Abbi Granger, DVM



Medical intervention is unlikely to change the course of an acute FIC disease process.

## DIAGNOSIS Feline Idiopathic Cystitis

The typical clinical presentation for feline idiopathic cystitis (FIC) is a young, indoor-only cat with lower urinary tract signs. FIC diagnosis is one of exclusion, that is, ruling out other causes of lower urinary tract disease first (eg, uroliths, bacterial urinary tract infection, neoplasia). It typically occurs secondary to stress.

### WORKUP

Urinalysis, urine culture, and imaging studies—ideally abdominal radiography (Figure 2)—will not rule out all possible causes of lower urinary tract disease. However, a cat that clinically responds to supportive therapy for the typical clinical signs of FIC may require nothing beyond first-line diagnostics.

Contrast radiography or ultrasonography, additional cultures to exclude the presence of *Ureaplasma* or *Mycoplasma* species, and/or cystoscopy may also be helpful when clinical signs are persistent or recurrent.<sup>1</sup>

If concurrent urethral obstruction is present, immediate intervention is required. However, placement of a urethral catheter in a patient without urethral obstruction may cause unnecessary trauma, predispose the patient to secondary bacterial infection, and stimulate additional urethral spasms that could lead to secondary obstruction after the catheter has been removed. Therefore, it is necessary for clinicians to perform a thorough examination to determine whether catheter placement is necessary. Cats with small, easily expressible urinary bladders typically do not require urethral catheterization.

### TREATMENT

Medical intervention is unlikely to change the course of the acute disease process; however, treatment is important for preventing recurrent episodes.

Important treatment considerations include environmental enrichment and stress reduction. Treatment plans can vary but need to involve

FIC = feline idiopathic cystitis

Careful evaluation of possible stress triggers. For this patient, treatment included:

- A canned diet to promote increased water consumption (Note: It is important to offer a cat any new food as a choice to avoid the dietary change from becoming a potential stressor.)
- Constant access to fresh, clean water
- Pain management (buprenorphine)
- Prescription  $\alpha$ -adrenergic blockers (ie, prazosin or phenoxybenzamine) to relax the smooth muscle of the urethra; the stress of administering a pill should be taken into consideration

Antimicrobial treatment was not prescribed in this case because the bacteria observed in the voided urine sediment were believed to be contamination from an outside source.

In addition, the client was encouraged to complete a questionnaire that evaluates environmental enrichment factors and prevents potential FIC triggers. The questionnaire can also provide discussion points for areas of improvement.

In this case, the questionnaire revealed that the owner had recently started a home remodeling project that may have been disruptive for the cat.

 **For a sample owner questionnaire on treatment considerations,** visit the Indoor Cat Initiative (ICI; sponsored by Ohio State University) at <http://vet.osu.edu/vmc/ici-survey>

The owner was encouraged to keep the cat in an area away from construction and to offer daily enrichment activities, such as interactive play with other family members, new toys, and indoor climbing towers.


### OUTCOME

The cat was reexamined in the clinic 1 week after treatment began, with telephone follow-up 1 month later. Telephone updates can provide owners with an opportunity to voice additional concerns and for veterinarians to make further recommendations.

In this case, the owners had adhered to the initial recommendations and reported that their cat was doing well.

**There's More!**

See "What Cat Owners Can Learn About Captivity," page 55, for more on feline enrichment activities.

 **DID YOU ANSWER ...**

- The differential diagnosis for this cat included obstructive or nonobstructive FIC, bacterial urinary tract infection, urocytoliths, and urinary tract neoplasia.
- Because FIC is typically secondary to stress, it is vital to carefully discuss the history for cats with lower urinary tract signs. Pet owners should be asked about recent environmental or household changes, a change in the number of animals or people in the home, litter box changes (ie, location, number, substrate), and dietary changes. Current environmental enrichment activities should be part of the discussion as well.
- Although cystocentesis is the urine collection method of choice, most cats with FIC have small, irritated bladders, making collection by any method other than voiding difficult. When using free-catch samples, remember the potential for contamination via the lower urinary tract as well as any surface that comes into contact with the urine. An aerobic urinary culture is part of a routine workup, but urine is typically sterile in young cats without other predisposing factors.

See Aids & Resources, back page, for references & suggested reading.