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Urinary Tract Obstruction in Ferrets

Basics

OVERVIEW

- Restricted flow of urine at any point in the urinary tract, from the kidneys to the external urethral orifice (the opening through which urine passes during urination)
- The urinary tract consists of the kidneys, the ureters (the tubes running from the kidneys to the bladder), the urinary bladder (which collects urine and stores it until the animal urinates), and the urethra (the tube from the bladder to the outside, through which urine flows out of the body).
- In both male and female ferrets, the most common cause of urinary tract obstruction is compression of the urethra by swelling, abscesses, or cysts of periurethral tissue (prostate tissue or remnants of prostate tissue), which occur due to ferret adrenal disease. The second most common cause is bladder stones.

SIGNALMENT

- More common in middle-aged or older ferrets
- More in males than in females

SIGNS

- Abnormal frequent passage of urine (known as pollakiuria)—common
- Straining with slow, painful discharge of urine (known as stranguria)
- Reduced velocity or caliber of the urine stream or no urine flow during efforts to empty the bladder (voiding efforts)
- Hair loss or thinning of hair coat in ferrets with adrenal disease
- Swelling of the vulva in female ferrets with adrenal disease
- Signs of excess levels of urea and other nitrogenous waste products in the blood (known as uremia or azotemia) that develop when urinary tract obstruction is complete (or nearly complete): sluggishness (lethargy), dull attitude, reduced appetite, and vomiting
- Excessively full bladder (causing an overly large or tense/turgid bladder) or inappropriate retained urine (urine remains after voiding efforts); distension of the urinary bladder can be felt during physical examination

CAUSES

- Periurethral cysts/prostatic cysts—cysts and/or abscesses that form in prostate tissue in males or remnants of prostate tissue in females. These tissues enlarge because of excessive sex hormone production in diseased adrenal glands. This is the most common cause of urinary tract obstruction in both males and females with



adrenal disease.

- Urinary tract stones (urolithiasis)—Bladder stones are more common in males than in females but can cause obstruction in both sexes.
- Cancer or tumors located in the bladder neck or urethra (uncommon)
- Scarring at a site of prior injury or inflammation can cause narrowing of the urethra, which may impede urine flow.

RISK FACTORS

- Ferret adrenal disease (hyperadrenocorticism) may cause urogenital cysts, prostatic hyperplasia, or prostatic cysts.
- Feeding of dog or cat foods that contain plant-based proteins may lead to the development of bladder stones.

TREATMENT

APPROPRIATE HEALTH CARE

- Complete urinary tract obstruction is a medical emergency that can be life threatening; treatment usually should be started immediately.
- Partial urinary tract obstruction—not necessarily an emergency, but these patients may be at risk for developing complete obstruction; may cause irreversible urinary tract damage, if not treated promptly
- Patients are hospitalized until the ferret's ability to urinate has been restored.
- Treatment has three major components: (1) Alleviate the buildup of waste products in the blood that accumulated because of bladder obstruction. This is usually achieved by administering IV fluid therapy. (2) Restore and maintain an open pathway for urine outflow. This is accomplished by passing a catheter through the urethra past the obstruction and into the bladder to allow urine to flow and drain the bladder. (3) Treat the cause of urine retention and urinary tract obstruction. This usually involves surgery to remove stones or to remove pus and fluid from the prostate, and to remove the diseased adrenal gland. Adrenal gland disease can also be treated medically if there is no actual pus or fluid in the prostate tissue. In some cases treating adrenal disease medically will allow the prostate tissue to shrink and urine to flow.

SURGICAL CONSIDERATIONS

- Surgery is required to remove urinary stones.
- Surgery is required to remove pus and/or fluid in prostate tissues if these tissues have large cysts or abscesses (pockets of pus).
- In many cases, surgery is the treatment of choice for adrenal disease. The diseased adrenal gland is removed, which allows enlarged prostate tissues to shrink and urine to flow normally.

MEDICATIONS

Medications presented in this section are intended to provide general information about possible treatment. The treatment for a particular condition may evolve as medical advances are made; therefore, the medications should not be considered all-inclusive.

- Procedures for relief of obstruction often require, or are facilitated by, giving sedatives or anesthetics.
- Enlarged prostate tissue may shrink enough to allow urine to pass with medical treatment of adrenal disease. Common medications that are used to treat adrenal disease include Lupron (Leuprolide acetate) or melatonin injections.
- Antibiotics may be given to ferrets with infection or abscesses in the prostate tissues. This is often used in conjunction with surgery.

FOLLOW-UP

PATIENT MONITORING

- Make sure that the ferret can urinate and completely empty the bladder.
- After treatment of adrenal disease, urinary obstruction may occur again if the second adrenal gland becomes diseased, or if the ferret no longer responds to medical treatment. Continue to monitor lifelong for recurrence of obstruction.

PREVENTION/AVOIDANCE

- Feed only high-quality ferret foods to prevent bladder stones.
- Treat ferret adrenal disease early in the course of disease to prevent prostate tissues from enlarging.

POSSIBLE COMPLICATIONS

- Death
- Injury to the urinary tract while trying to relieve obstruction
- Recurrence of obstruction

EXPECTED COURSE AND PROGNOSIS

Long-term management and prognosis depend on the cause of the blockage or obstruction.

KEY POINTS

- Urinary tract obstruction is the restricted flow of urine at any point in the urinary tract. In ferrets, the urethra is the most common area of obstruction, and urine cannot pass out of the bladder.
- Complete urinary tract obstruction is a medical emergency that can be life threatening; treatment usually should be started immediately.
- In both male and female ferrets, the most common cause of urinary tract obstruction is compression of the urethra by swelling, abscesses, or cysts of periurethral tissue (prostaste tissue or remnants of prostate tissue), which occur due to ferret adrenal disease. The second most common cause is bladder stones.
- Bladder stones are caused by feeding cat or dog foods that contain plant proteins. Always feed high-quality ferret foods to prevent the formation of bladder stones.

Notes

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