

Orthopaedics Oncology Medicine Dermatology Soft tissue surgery Specialist Imaging Cardiology Anaesthesia Neurology Physiotherapy

<u>Urethral Obstruction due to Feline Lower Urinary Tract Disease (FLUTD)</u>

What is FLUTD?

This is the term used to describe a syndrome of conditions causing inflammation of the lower urinary tract in cats. Both female and male cats can be affected and it causes painful bladder inflammation and sometimes infection. In male cats, the inflammation can cause the urinary tract to become obstructed and this becomes a clinical emergency and a significant problem. Sometimes the condition is associated with stones formed in the urine in the bladder or with stress.

Cats are typically 2-6 years of age when they first present with FLUTD and males are predisposed to obstruction due to smaller urethral size. Predisposing factors for FLUTD include stress, obesity, bladder stones, living indoors, winter/spring seasons and a previous episode (there is 30-70% recurrence rate).

Why do male cats develop urethral obstruction?

The urethra (the tube between the bladder and the outside) of the male cat becomes very narrow at its termination in the penis. Male cats that have a tendency to develop FLUTD may suffer urethral obstruction, usually due to the proteinaceous plugs getting stuck in the narrow end of the urethra. Obstruction can be exacerbated by urethral spasm that occurs in response to the obstruction and inflammation, or from urethral catheterisation. Male cats with urethral obstruction are unable to pass urine or can only pass small amounts. They may spend large amounts of time in a litter tray or may seem to be urinating in inappropriate places in the house – it may not be apparent that urine is cannot be passed unless the litter tray is inspected. They may vocalise when attempting to pass urine and may develop an inflamed, protruding penis. Urethral obstruction may progress to systemic signs (vomiting, depression, anorexia) and untreated may develop slowing of the heart (bradycardia, due to high levels of potassium in the blood), ruptured bladder, kidney failure or sudden death.

Physical examination findings in non-obstructed cats may include a small, easily expressed, thick walled and sometimes painful bladder. After obstruction the bladder is large, painful and hard or impossible to express.

How is non-obstructive FLUTD managed?

Cats presenting with FLUTD for the first time are often managed empirically without investigation, unless they are obstructed. Complete investigation is usually performed after recurrence of non-obstructive episodes or after successful management of an obstructive episode. Analysis of a urine sample may indicate the presence of stones (uroliths), abnormal pH or infection and diagnostic imaging may be used to check for stones or partial obstruction.

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Most cats (70%) with FLUTD will have resolution within 7 days, regardless of treatment. There are few controlled studies regarding treatment, making recommendations difficult, but pain relief is an accepted important part of treatment. Some urinary tract stones can be dissolved with a special diet, but not all. Antibiotics are indicated only if urine culture is positive.

How is urethral obstruction managed initially?

Cats with urethral obstruction are usually dehydrated, with elevations of kidney parameters and potassium levels in the blood. They receive intravenous fluid therapy before urinary catheterisation, usually under sedation or anaesthesia. If the obstruction can be relieved, the cat is maintained on intravenous fluid therapy and analgesics (pain killers) with the catheter in place for several days. Urine tests are performed and appropriate medical therapy is instituted e.g. dietary changes. Cats that have urethral spasm may also require medication to relax the urethra. These cats will return home with advice on techniques to reduce the risk of occurrence. Long term management may involve changes in the home environment or removal of stressors for the cat. Complications with urethral catheter management of urethral obstruction are rare.

When do cats with urethral obstruction need surgery?

Surgical treatment is offered as an elective surgery if a cat is suffering repeated episodes of urethral obstruction. We usually recommend surgery if three obstructive episodes occur within 1-2 years. Surgery will be recommended as an urgent procedure if urethral obstruction cannot be relieved with catheterisation or if the urethra is damaged. The most common procedure is perineal urethrostomy, where the narrow part of the urethra in the penis is removed, and a wider opening is made into the urethra higher up in the perineal region, under the anus. Cats may be more at risk of urinary tract infections after surgery, and the surgery will not eliminate episodes of FLUTD that will continue to require medical management, but the incidence of future obstructive episodes is very low after surgery.

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