



Feline Lower Urinary Tract Disease (FLUTD) - Part 1



I hope you enjoyed the last couple of articles on thyroid diseases in dogs and cats. In the next couple of articles, we are going to look at a condition we see commonly in cats, which is technically termed 'feline lower urinary tract disease' (FLUTD). FLUTD is not a specific disease but rather a term used to describe a number of diseases of the bladder and urethra (the tube which carries urine from the bladder to outside) in cats. You may have experienced it in your cat as '**cystitis**', '**urinary tract infection**', '**stress-induced cystitis**', '**bladder stones**' or '**blocked bladder**'. These are all very different things, and FLUTD is a very complicated condition, but I have done my best to simplify it for you all. In this article we will cover the signs and causes of FLUTD. In the next article, we will cover the investigation and treatment of FLUTD.

It is thought that 20% of cats suffer from FLUTD at some point in their lives, but it is seen more frequently in cats that are 'indoor', middle aged, overweight, and/or eat only dry food.

Signs of FLUTD

The clinical signs of FLUTD include:

- straining to urinate (or constantly squatting but nothing comes out);
- going to urinate, or attempting to urinate, more often than usual;
- urinating in inappropriate places (outside the litter tray or in the house);
- showing pain (crying out) whilst urinating;
- constant licking at the penis/vulva and over-grooming (obsessive licking at their fur and hair loss);
- fresh blood in the urine or blood 'dripping' from the penis/vulva;
- aggression and irritability;
- eventually becoming very lethargic with a low heart rate - if they show this, the bladder may be ruptured and we do not have much time.



Remember, if your cat is showing any of these signs, he/she may have a complete blockage in the urinary tract (a 'blocked bladder') and be UNABLE to urinate - this is an emergency situation as the bladder may rupture.

Causes of FLUTD

Because the term FLUTD describes a number of diseases of the bladder and urethra, there are a number of possible causes for it, and some testing is needed to decide which of these is playing a role in your cat. However, although FLUTD has a number of **'known'** causes, the majority of cases (60-70%) actually prove to be **'idiopathic'**, meaning the cause is unknown. We will discuss the idiopathic form ('idiopathic cystitis') in more detail further down.

'Known' Causes of FLUTD



Bacterial infections of the bladder (bacterial cystitis):

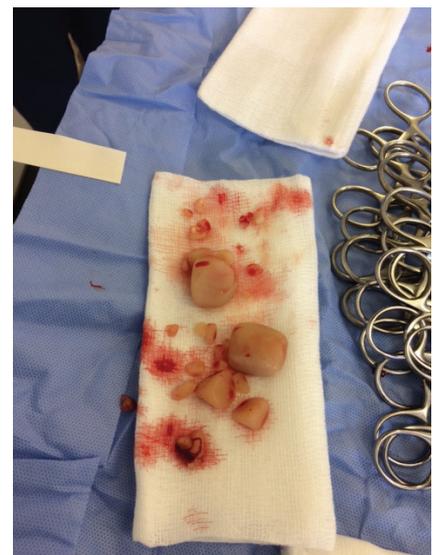
Bacterial cystitis is inflammation of the bladder due to a bacterial infection. Unlike in dogs, bacterial cystitis is rare in cats, probably because cats' urine is particularly concentrated and bacteria are unable to survive in it. However, conditions such as diabetes or administration of medications such as steroids can increase the risk of bacterial cystitis.

Bladder stones (urolithiasis) and urethral plugs:

These are the most common 'known' cause of FLUTD. Bladder stones are solid lumps of mineral (the most common being magnesium ammonium phosphate, or 'struvite') which develop in the bladder. Urethral plugs are an accumulation of cells, proteins, crystals and other debris which form in the urethra. Large bladder stones that remain in the bladder cause constant inflammation and irritation, but are usually less of a problem and can be asymptomatic for some time (without clinical signs). Small bladder stones (stones small enough to enter the urethra) and urethral plugs are much more dangerous because they can cause complete blockage of the urethra (a 'blocked bladder'). How and why stones and plugs develop is complex, but diet, water intake, levels of exercise and urine pH (acidity) all play a role.

Strictures (narrowings):

If your cat has had repeated bouts of FLUTD for whatever reason, the urethra can become damaged by scarring as the body tries to heal itself. This leads to narrowing of the urethra and either a partial or complete blockage.



Neoplasia (tumours/cancer):

Cancer of the bladder or urethra is not common but it is important that this is ruled out, especially in older cats. Tumours in the bladder and/or urethra can also cause a partial or complete blockage.

'Idiopathic Cystitis'

Idiopathic cystitis means inflammation of the bladder for unknown cause. As mentioned above, this is the most common form of FLUTD. It has been compared to the condition called 'interstitial cystitis' seen in humans and there have been a number of proposed mechanisms put forward to try and explain what causes it. These have included viruses, food allergies, immune-mediated disease (when the immune system starts 'attacking' normal/healthy tissues), reduced production of certain substances which help keep the



bladder lining healthy, stress, and feeding dried food. There is also evidence now that it is a primary neurological disease, so a problem with the brain and/or nerves to the bladder rather than the bladder itself. In any case, **stress and dried food** are thought to be the most important factors (hence it can be called 'stress-induced cystitis'), and I shall discuss these more when we talk about treatments.

I hope you enjoyed the first part of this two part series. Next time, we will look at the investigation and treatment of FLUTD. If you have any questions about FLUTD, its clinical signs and/or causes, please do get in touch.