



Urinary Incontinence in Dogs - Part 2



I hope you enjoyed the first part of this series on urinary incontinence in dogs. This article covers its investigation and treatment. As with the previous series on FLUTD, you will need to have read part 1 to fully understand part 2.

Investigation of Urinary Incontinence

When investigating urinary incontinence, it is important to establish if your dog has a 'true' incontinence, or if there is an underlying problem leading to 'urge' incontinence, 'overflow' incontinence or increased urine production (see part 1 for more information). Diagnosis of USMI ('hormonal incontinence') is a 'diagnosis of exclusion', which means that all other causes of incontinence should be ruled out before that specific diagnosis is made.

The first step in investigating urinary incontinence is to gather lots of information about your dog, and their signs. These include:

- 1) how old is your dog, is he/she neutered, and, if so, when was that done?
- 2) when does your dog leak - only at night, when active, or when resting?
- 3) can he/she urinate normally at other times?
- 4) is he/she showing any other signs such as straining to urinate, pain on urination, or urinating more frequently?
- 5) is he/she drinking more?
- 6) is he/she on any medication?



The next step is to try to feel the bladder. Often this is not possible in dogs, unless it is grossly abnormal, but we may be able to detect pain or discomfort. It may also be necessary to check for signs of prostatic or vaginal disease, nerve damage, and/or diseases, which cause excessive urination.

Like in FLUTD, it is essential to take a urine sample to check for blood, protein, crystals, glucose (sugar) and bacterial infection. Checking urine for bacterial infection will, again, require urine to be taken directly from the bladder using a needle. We will also check how concentrated the urine is, because many diseases which cause increased urination, such as renal disease, diabetes and Cushing's disease, do so because of a decrease in urine concentration.

Depending on what has been found out at this stage, a blood test may be necessary. This will help pick up those diseases which cause excessive urine production, and allow us to check for any secondary damage to the kidneys if there are concerns about a blocked bladder or severe urinary tract infection.

The final part of investigating urinary incontinence in dogs is imaging of the bladder, urinary tract and/or prostate. An ultrasound scan of the abdomen can be used to look for bladder and urethral stones, bladder tumours, bladder wall thickening, prostatic disease and kidney disease, and can help locate where the ureters enter the bladder.



X-rays can also be helpful for imaging the urinary tract, especially to look for bladder stones, but it usually requires injecting a special dye, or injecting air, into the bladder to assess the bladder wall. Ectopic ureters can be diagnosed with special X-ray studies, using dye injected directly into the dog's vein, and X-rays may be used to check for intervertebral disc disease or trauma.

In some cases, it requires direct visualisation of the bladder using a camera, but this needs referral to a specialist hospital.

Treatment of Urinary Incontinence

As you will appreciate, treatment of urinary incontinence depends on its underlying cause, and I have summarised the treatments for the each of the conditions discussed in part 1 below.



Ectopic ureters:

Repair of ectopic ureters requires complicated surgery or use of laser equipment and cameras. Both of these will need referral to a specialist hospital.

Urethral sphincter mechanism incompetence (USMI) or hormone-responsive incontinence ('hormonal incontinence'):

USMI cannot be treated but, in the vast majority of cases, can be managed with daily medication. There are two medications we use, both of which work by increasing the 'tone' (contraction) of the urethral sphincter. The first of these is phenylpropanolamine ('Propalin' or 'Urilin'), and this works by directly binding the special 'adrenergic alpha-

receptors' which contract the urethral sphincter. The second medication we use is an oestrogen compound ('Incurin'), which increases the overall number of these special 'adrenergic alpha-receptors'. Remember, levels of these receptors drop when oestrogen levels drop. These medications can be used together to increase their efficacy, but both have potential side effects. 'Propalin' needs to be given daily; 'Incurin' MAY only need to be given every other day, but this is not necessarily the case; both are needed long term.



If your dog does not respond to medical management, there are surgical options to try and improve continence, but these are difficult procedures and would require referral to a specialist.

Urinary tract infection and cystitis (inflammation of the bladder):

Confirmed urinary tract infections are treated using antibiotics, depending on which bacteria is causing the problem and which antibiotics it is killed by. UTIs and cystitis are also treated with anti-inflammatory drugs.

Bladder and urethral stones, or tumours:

Bladder stones usually have to be removed surgically (though some can be dissolved or broken up using lithotripsy - ultrasound lasers), and we would attempt to dislodge urethral stones using a urinary catheter. If this is not possible, surgery may be needed. Treatment of bladder tumours will depend on what type of tumour it is, and its location. A common type of bladder tumour called a transitional cell carcinoma seems to respond very well to one of the standard non-steroidal anti-inflammatory drugs we use called meloxicam ('Loxicom' or 'Metacam').

Brain or nerve damage:

Dogs with intervertebral disc disease or other trauma to the spinal cord or nerves would need to be assessed, looked after and treated on a case by case basis. Surgery may be needed depending on the severity of the damage.

Prostatic or vaginal disease:

Treatment of prostatic disease requires a whole article itself (this will come!), and depends on what disease process is going on. This is also the case with vaginal disease. These would also be dealt with on a case by case basis.



Detrusor urethral dyssynergia (DUD) or ‘functional obstruction’:

Like USMI, DUD cannot be treated as such, but it can be managed with muscle relaxants. The details are quite complex and two different muscle relaxants may be needed. These work on different types of muscle (smooth muscle or skeletal muscle), both of which are present in a dog’s lower urinary tract. Some dogs with DUD also benefit from anti-depressive/sedative medication, as many dogs with DUD get worse when they are stressed or anxious.

Diseases and medications, which cause excessive urine production:

If your dog is diagnosed with a disease which causes excessive urine production, treatment or management of the disease usually leads to complete resolution of the apparent incontinence. If your dog is on medication which increases urine production, we may be able to reduce the dose or use an alternative medicine. However, in many cases, this will not be possible, so it may be a case of continuing to manage the incontinence until the dog is off its medication (if it ever can be!).



If you have any questions about the investigation and treatment of urinary incontinence in dogs, please get in touch. We’re going to have a short break now, so the next article will be in 4 weeks time, rather than the usual 2. However, it will talk about that very exciting, yet important time, when you first take home your new puppy or kitten.