

BASIC INFORMATION

Description

Urinary incontinence is the involuntary release of urine from the bladder. Incontinence differs from urinary accidents where the dog is aware of the urination (for example, squats to urinate) but may be unable to wait for an appropriate time or place to urinate. Incontinence may arise when problems of the bladder sphincter (the muscle that keeps the bladder closed) or the beginning of the urethra allow urine to leak from the bladder. Urinary incontinence is uncommon in the cat.

Causes

Urinary incontinence can be caused by many different problems. A common cause in young, large-breed dogs is primary urethral sphincter incompetence (also known as *spay incontinence* or *estrogen-responsive incontinence*, although these names are inaccurate). In this condition, the urethral sphincter is weak.

Another common cause in young dogs is ectopic ureters. Secondary causes of incontinence that affect dogs of various ages include inflammation of the urethra or bladder, such as bladder infection, urethritis, stones, or cancer of the bladder or urethra. Spinal diseases can also cause loss of control of the bladder.

Clinical Signs

Urine may dribble constantly or only when the dog is relaxed (sleeping or lying down). In some cases, urine leaks only when the dog jumps or barks. With primary urethral sphincter incompetence, other signs of bladder disease, such as straining to urinate or painful urination, are usually absent. Dogs with this disease usually urinate normally when outside. If other bladder signs are present, such as urgency, pain, straining, or bloody urine, a secondary cause of incontinence is more likely.

Diagnostic Tests

Tests are usually recommended to evaluate the common causes of bladder disease; these may include a urinalysis, urine culture, abdominal x-rays, and an abdominal ultrasound. Cystoscopy (direct inspection of the urethra and bladder with a fiberoptic viewing scope) or a contrast study (injection of dye into a vein or into the bladder followed by a series of x-rays) may detect ectopic ureters or other anatomic abnormalities.

If all initial diagnostic tests are normal, special tests may be indicated to measure the strength of the bladder wall and the urethra. These tests are not commonly available in practice, so your pet may be referred to a veterinary specialty center for these procedures.

TREATMENT AND FOLLOW-UP

Treatment Options

Surgical or laser correction of ectopic ureters is indicated if that condition is present. (See the handout on **Ectopic Ureter in Dogs**.) With secondary urinary incontinence, treatment of the underlying problem usually cures the incontinence. Such treatment may include antibiotics for infection, removal of stones, and other measures.

Medication is helpful in controlling or decreasing the incontinence in cases of primary urethral sphincter incompetence. The drug, phenylpropanolamine, helps the sphincter contract more tightly. It is usually given two to three times daily. Side effects of this medication include high blood pressure (hypertension) and hyperactivity, but most dogs tolerate the medication well. An alternative medication, estrogen pills, can be given twice weekly. Phenylpropanolamine and estrogen can be used together if one drug fails to control the incontinence. Newer drugs are available for use in people, but experience with them in dogs is limited.

If medical management is unsuccessful, collagen injections may be beneficial in some dogs. With the animal under anesthesia, a cystoscope is used to inject a bulking agent (usually collagen, but other substances have been used) into the wall of the urethra. The bulking agent narrows the opening of the urethra, which may allow a weak sphincter to better control urine flow. Over time, the urethra will open again, and some patients require repeated injections every 3-12 months to remain continent. Hydraulic occluder devices have been placed in some dogs. Other surgical procedures have been described to treat severe cases of incontinence that have not responded to medications, but the success of surgery has been variable.

Follow-up Care

Dogs with primary urethral sphincter incompetence that is controlled with phenylpropanolamine and/or estrogen are often monitored with a urinalysis and urine culture every 6 months to ensure that no infection has developed.

Prognosis

In general, urinary incontinence is not a life-threatening disease. In most dogs, the incontinence can be controlled with medications, but in a small number of dogs it is resistant to all forms of therapy.