Cystitis in Dogs

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BASIC INFORMATION

Description

Cystitis is a general term for inflammation of the bladder. In dogs, the term is often used to describe infections of the bladder, but many other conditions can cause cystitis.

Causes

The most common cause of cystitis in dogs is urinary tract infection. Bladder infections are common in female dogs and can occur in male dogs. Conditions that increase the risk of bladder infection include bladder stones, anatomic abnormalities (such as congenital ectopic ureters), urinary incontinence, diseases that impair the immune system's ability to fight infection (such as Cushing's disease, diabetes mellitus, or chronic kidney disease), inability to completely empty the bladder (common with severe back problems), chronic skin infections around the vulva of female dogs, and prostate infections in male dogs. Bladder infections are not contagious.

Bladder stones, which irritate the lining of the bladder, can cause cystitis. Other causes include bladder cancer and benign, inflammatory polyps. Idiopathic (unknown cause) cystitis, which is common in cats, is very rare in dogs.

Clinical Signs

Common signs include frequent urination of a small volume of urine, straining and urgency to urinate, pain while urinating, and blood in the urine. Affected dogs may urinate in the house because they cannot hold the urine. They are aware they are urinating (for example, a female dog will squat). Urinary incontinence (unconscious release of urine) also can occur with cystitis, and it can be difficult to distinguish inappropriate, voluntary urination from incontinence if the dog is not observed.

Diagnostic Tests

Physical examination findings may include skin infections around the vulva or the presence of folds of skin that partially cover the vulva, thereby trapping moisture and increasing the risk of skin infection. Obesity makes those skin folds larger, and weight loss is necessary to control this problem. Assessment of nerve function in the back legs, tail, and anus may help identify problems that are also affecting the bladder.

Urinalysis and urine culture are usually done for dogs with signs of cystitis. The ideal way to obtain a urine sample for culture is to remove the urine directly from the bladder with a needle (cystocentesis). This is a simple procedure, similar to drawing a blood sample. The second best method to obtain urine for culture is to pass a urinary catheter into the bladder. Because a few bacteria are normally present at the opening of the urethra, it is possible to contaminate the urine when samples are collected in this fashion. Urine samples caught when the patient is voluntarily urinating (voiding) may also have normal bacteria in them, making interpretation of cultures difficult. If voided samples are used, they should be collected in the middle of urination, and the urine should not touch the fur as the dog is urinating.

Additional potential diagnostic tests include laboratory tests to rule out kidney disease and other medical conditions, abdominal x-rays to look for bladder stones, and an abdominal ultrasound to look for bladder stones, polyps, cancer, or other problems. In some cases, other specialized tests such as cystoscopy or contrast x-ray studies may be recommended.

TREATMENT AND FOLLOW-UP

Treatment Options

For bacterial infections, antibiotics are usually effective. The choice of antibiotic is ideally based on results of urine culture. Culturing identifies the specific bacteria involved and predicts the response to various antibiotics. A simple bladder infection can usually be cured in 5-7 days. With long-standing infections, recurrent infections, or infections complicated by untreatable causes, a longer course of antibiotics may be needed. In rare cases, the infection is never completely cured and long-term or intermittent antibiotics is required to control it.

For other causes of cystitis, correction of the underlying problem usually improves the signs. For example, removing bladder stones decreases irritation within the bladder. If benign bladder polyps are present, anti-inflammatory medications may be needed in addition to antibiotics.

Follow-up Care

For simple bladder infections, signs generally improve within a few days of starting antibiotics. Urine may be cultured 3-7 days after the antibiotics are completed, to ensure that the infection has been eradicated. For complicated cases, urine culture may be performed monthly for several months to make sure the infection does not return.

Prognosis

Simple bladder infections have an excellent prognosis. If the underlying cause of the cystitis cannot be cured, the cystitis may persist (continuously or intermittently). Long-term concerns include secondary infection of the kidney, which can cause kidney failure.

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