Treating Urinary Incontinence in Dogs

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Micturition (urination) disorders can create serious problems for pets and their owners. Untreated micturition disorders may lead to unresponsive urinary tract infections that can be persistent and expensive. Incontinent animals may also lie in their urine, leading to the developement of rashes or decubital ulcers. Urinary incontinence is frustrating and unacceptable to most owners; therefore, appropriate diagnosis and treatment are essential to prevent possible euthansia of the pet.

Several classes of drugs are used for the treatment of urinary incontinence in dogs. They include cholinergic agonists, anti-cholinergics, alpha-adrenergic agonists, alpha-adrenergic antagonists, smooth muscle relaxants, skeletal muscle relaxants, tranquilizers, and hormones. Antibiotics and anti-inflammatories are sometimes indicated as adjunctive therapy. Most of the drugs used for treatment of urinary incontinence are human approved or compounded products. Compounding pharmacists committed to strengthening the support they provide for veterinarians, their clients, and patients are able to provide prescribed medications in dosage forms and strengths tailored for the individual animal. The partnership between veterinarians and pharmacists can radically improve compliance and, as a result, therapeutic outcomes.

A variety of drugs are used to treat neurogenic micturition disorders. The primary medications used for lower motor neuron disorders are bethanechol, which increases detrusor contractions, and concurrent antibiotics. This treatment may, however, be ineffective. Other medications used experimentally include metoclopramide, which is reported to directly stimulate detrusor contractions in dogs, along with prostaglandins E2 and F2 which stumulate both detrusor and urethral smooth muscle. Long-term management of upper motor neuron disorder is frustrating and requires intermittent catherization and antibiotics. In the case of detrusor-urethral dyssynergia, skeletal muscle relaxants such as diazepam, dantrolene, and baclofen are used for the external sphincter relaxation. Alpha-adrenergic blocking agents, such as phenoxybenzamine, prazosin, doxazosin, and terazosin are used to decrease internal sphincter resistance. Prazosin, doxazosin, and terazosin can also decrease external sphincter resistance through a centrally mediated effect.

Female dogs suffering from hormone-responsive incontinence are treated with diethylstilbestrol or an alpha-adrenergic agonist. Testosterone cypionate may be used in male dogs. Some animals develop a tolerance for hormonal therapy. Drugs that increase urethral smooth muscle tone directly or indirectly, such as phenylpropanolamine, ephedrine, and imipramine are used for treatment of urethral incompetence. Drugs that reduce detrusor hyperspasticity and relax smooth muscle are commonly used to treat detrusor hyperreflexia. Some examples include propantheline, flavoxate, oxybutynin, and dicyclomine. Non-pharmacological treatment of detrusor atony from over distension includes removal of the obstruction or primary cause and indwelling urinary catherization for 7 to 14 days to facilitate re-establishment of the tight junction connections in the detrusor muscle. For post obstructive atony, bethanechol is used to stimulate detrusor contractions in both neurogenic and non-neurogenic atonic bladders. When the over distention is caused by increased urethral resistance, phenoxybenzamine or another alpha-adrenergic blocker may be used to decrease urethral smooth muscle tone, and diazepam or dantrolene may be used to decrease urethral skeletal muscle tone. Drug therapy may also include anti-inflammatories and antibiotics. Surgery is indicated for paradoxical incontinence and ectopic ureter and alpha-agonists may be used to stimulate urethral sphincter tone when incontinence persists following surgery, although this therapy is not always successful.