

## Nutritional Support for a Case of Canine Urinary Incontinence

By Arthur Freedman, D.V.M.

### Background

Canine urinary incontinence or urethral incompetence is most common in spayed, female dogs, affecting as many as 20% of these animals. Most often affected are medium to large breed dogs, in which the incidence of the disorder may approach 30%. Urinary incontinence may develop in as little as six months after a female dog is spayed, but it is rarely observed in intact female dogs.

Urinary incontinence results from weakened contraction of the smooth or striated muscle within the wall of the urinary bladder neck and urethra. If the urethral wall muscle does not maintain a contractile tone, urine leakage will occur from a distended urinary bladder. The poor contractile tone is due to a decreased sensitivity of alpha-adrenergic receptors within the muscle wall.

Traditionally, treatment for canine urinary incontinence resulting from spaying has been administration of either reproductive hormones or alpha-adrenergic agonist drugs. Reproductive hormone replacement therapy (HRT) via administration of the synthetic estrogen, diethylstilbestrol (DES), is often effective. Estrogens appear to increase the sensitivity of alpha receptors in the urinary bladder neck and urethra. However, an infrequent but potentially serious side effect of HRT is bone marrow suppression. Additionally, signs of estrus or “heat” may occur.

Alpha-adrenergic agonist therapies include the use of phenylpropanolamine (PPA), ephedrine, and pseudoephedrine, with PPA being the most commonly used. These drugs act at the alpha receptors and directly stimulate urethral smooth muscle contractile tone. They are usually administered when DES is ineffective. This class of drugs is contraindicated when heart disease or hypertension are present since they can cause serious worsening of the clinical signs.

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Arthur graduated from Purdue's School of Veterinary Medicine in 1977 and began traditional veterinary practice. In 1998-99, he enrolled in a professional course in Veterinary Homeopathy followed by an advanced course in 1999. He is an Associate Member of the Academy of Veterinary Homeopathy and has attended the Annual Meeting of Veterinary Homeopathy from 1999 - 2002.

His current holistic practice consists of three veterinarians and offers acupuncture, herbal medicine, homeopathy, flower essence therapy, and nutritional management, in addition to conventional therapies.



## Case History

**Skyler:** 10-year-old, spayed (at six months of age), female golden retriever.

Skyler has multiple medical problems, including urinary incontinence and protein-losing nephropathy. Diagnosis of the renal disorder was confirmed by ultrasound guided kidney biopsies.

The urinary incontinence has been problematic since April 2001. Radiographic evaluation of the urinary bladder and associated structures was within normal limits. Urinalysis did not reveal any potential causes. Skyler was placed on diethylstilbestrol (DES). After approximately ten days, there was no obvious improvement, at which time phenylpropanolamine therapy was initiated and continued from May through August 2001. However, the urinary incontinence was not controlled even at the maximum dose. In addition, Skyler was diagnosed with hypertension, precluding the continued use of phenylpropanolamine.

In September 2001, Symplex® F (Standard Process Inc., Palmyra, WI), two capsules BID, was initiated as a last resort. Skyler's urinary incontinence began to subside and was almost completely controlled. She has done remarkably well on Symplex® F with no side effects.

The owners are very happy with Skyler's progress on Symplex® F over the last eight months.

Symplex® F supplies important cellular constituents for each of the glandular structures from which it is derived. This balanced approach to the endocrine system appears to sufficiently compensate for the loss of ovarian secretions caused by the surgical removal of the ovaries. It is unlikely that the Symplex® F is having a direct effect on the urethral smooth muscles. Rather, because the glands of the endocrine system are known to have direct and indirect interactions, missing factors can result in some level of imbalance or dysfunction. Supplementation of some of these factors with Symplex® F along with support of the existing glandular structures can lead to improved endocrine balance that fosters improved urinary control.

Regardless of the precise mechanism of Symplex® F activity, it has been effective and has fostered my goal of avoiding use of pharmaceutical preparations with their associated side effects.

## Final Thoughts

I have used Symplex® F in six dogs with urinary incontinence. The results have been mixed. Skyler is the only patient that has really done well on the Symplex® F. Based on my experience with this product, I feel there is enough evidence to warrant utilizing it in these cases because of a lack of side effects and its potential benefits. This is especially important since there are limited, effective therapeutic choices for management of this disorder. Existing therapies have significant side effects and are not always successful. Caution should be exercised when using phenylpropanolamine in older dogs, especially if they are prone to heart or kidney problems, or high blood pressure. Skyler does have kidney disease as well as systemic hypertension. Likewise, caution should also be exercised with the use of DES because of its potential side effects, which include thromboembolic complications (Smith, 1988) and gastrointestinal toxicity (Gockerman et al., 1986).

Symplex® F contains Protomorphogen™ extracts from adrenal, pituitary, ovary, and thyroid glands. It is supportive of these endocrine glands. Skyler was spayed long before she developed this problem, so a direct role of Symplex® F on ovary function is obviously ruled out. However, the adrenal glands do secrete estrogen in small amounts, and may secrete other substances that help stimulate and tone the muscles of the urethra.

The benefits of Symplex® F in managing this challenging clinical problem may be enhanced by combining it with products like Vasculin®, which contains factors important for muscle support as well as B complex vitamins that may enhance nerve conduction. Improvements in renal health, through the use of products like Canine Renal Support™, may contribute to better renal function and easier management of the urine volume as well as supporting the mucosal tissues.

## References

- Gockerman, J. P. et al. 1986. Randomized comparison of tamoxifen versus diethylstilbestrol in estrogen receptor-positive or -unknown metastatic breast cancer: A Southeastern Cancer Study Group trial. *Cancer Treat Rep* 70(10): 1199-1203.
- Smith, J. A. 1988. Hormonal therapy of prostate cancer: Current concepts and future prospects. *Clin Ther* 10(3): 281-286.