

DERMATOLOGY PEARLS

*Provided by Dr. Kimberly Coyner, DVM DACVD
Dermatology Clinic for Animals of Las Vegas
5231 W. Charleston Blvd.
Las Vegas, NV 89146
(702) 821-1002
www.dermvetvegas.com*

PEARL OF THE MONTH: ACCIDENTAL HORMONE EXPOSURE IN PETS

Topical creams and sprays containing hormones such as estradiol, are becoming popular in the treatment of menopausal symptoms in women. These products are typically applied to the skin on the inside of the forearm between the elbow and the wrist. There are now increasing reports of exposure of children and pets to these topical hormones.

In children, the reported adverse effects were consistent with premature puberty in females, including development of breast buds and breast mass. For males, reported adverse effects were consistent with gynecomastia. The signs and symptoms appeared several weeks to months after the adult patient initiated therapy with topical hormones. Some cases reported symptom resolution after the user discontinued the drug or used preventive measures (long sleeved shirts, preventing direct contact of the treated area) to avoid unintentional exposure of children to the drug.

Reports of secondary exposure in two spayed female dogs have been received by FDA's Center for Veterinary Medicine since 2007 and include signs of mammary/nipple enlargement, vulvar swelling, and liver failure in one case, and vaginal prolapse and elevated estrogen levels in the other. In both cases, secondary exposure occurred through licking of the owner's arms or by the dog being held by the owner.

VIN staff veterinarians and news reporters subsequently found numerous cases mentioned on VIN's online message boards, most from the past 18 months but one dating as far back as 2003. At last count, the VIN News Service tallied more than 100 suspected cases; thirteen reports were logged this year alone. Most of the cases involve small spayed female dogs or puppies, but large breeds, males and dogs of all ages are susceptible as well. Clinical signs common to both sexes are swollen nipples and mammary glands. Females typically exhibit grossly enlarged vulvas. Males may have unusually small penises and/or prostate infections. Patients sometimes present with hair loss and skin discoloration. Cats also have been affected, generally showing behavioral changes as if in heat.

Depending on the period of exposure, clinical signs may take months to resolve. Lengthy exposures in dogs could heighten their risk of mammary cancer or lead to bone marrow suppression resulting in chronic anemia, although no such cases have been documented.

The problem isn't limited to women's hormone use. The U.S. Food and Drug Administration (FDA) in May 2009 reported eight cases of children being accidentally exposed to testosterone gels used by men. The children, ages 9 months to 5 years, presented signs including enlargement of the penis or clitoris, development of pubic hair, advanced bone age, increased libido and aggressive behavior. In one unusual case relayed by a veterinarian to the VIN News Service, a 1-year-old male papillon in Arizona was exposed to topical estrogen *and* testosterone used by his female and male owners, respectively. The dog had chronic inflammation of the prepuce, incontinence, enlarged nipples, hair loss, prostatic cysts and abnormal internal structures in his reproductive organs.

Despite coverage in the popular press and government pronouncements on the topic, awareness remains limited, and these cases illustrate the importance of obtaining a very thorough drug history for all members of the family when we are presented with a case of endocrine-appearing disorder in dogs and cats.