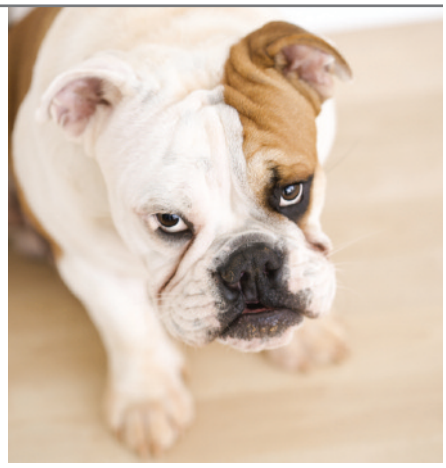
Corticosteroid Therapy: Proceed with Caution



An 8-year-old male English bulldog receiving treatment for immune-mediated thrombocytopenia presented with severe, sloughing dermatitis 90 days after initiation of corticosteroid therapy. Calcinosis cutis secondary to iatrogenic hyperadrenocorticism (HAC) was diagnosed. Prednisone was discontinued and treatment initiated with antibiotics, pain medication, and therapeutic baths. Skin lesions remained severe at 2-week follow-up, and 10 days later the dog presented comatose and was euthanized. Coronary arteriosclerosis and myocardial infarction leading to congestive heart failure were found postmortem.

Calcinosis cutis, uncommon in dogs, occurs in association with various diseases, most commonly spontaneous or iatrogenic HAC. Cases are subclassified as dystrophic, metastatic, idiopathic, or iatrogenic. The most common cause of dystrophic calcinosis cutis in dogs is HAC, thought to alter the structure of proteins within collagen and elastin fibers, resulting in a predisposition to calcification. Widespread areas of cutaneous calcification are usually seen. In this patient, calcinosis cutis was believed to represent a case of dystrophic calcification secondary to iatrogenic HAC. There were no signs of cardiac disease, and the unexpected postmortem diagnosis of congestive heart failure might have resulted from multiple myocardial infarctions secondary to arteriosclerosis of coronary arteries. The comatose state may have resulted from significant ischemic brain injury secondary to myocardial failure, and the corticosteroid administration may have exacerbated underlying arteriosclerotic heart disease.

Commentary

This report illustrated the importance of knowing the more severe adverse events of corticosteroid therapy. While common adverse events of corticosteroids (eg, polyuria, polydipsia, polyphagia, panting) may be discussed with owners, it is crucial to discuss more severe and long-term adverse events (eg, poor wound healing, infections, muscle wasting). Although the adverse effects discussed may be unusual, this report detailed the advantages of using multimodal therapy for suppressing immune-mediated disease, as well as the need for frequent monitoring and tapering of corticosteroid dosing in a timely fashion to minimize risk for more serious adverse effects.—*Jennifer Ginn, DVM, MS, DACVIM*

Source

Iatrogenic hyperadrenocorticism, calcinosis cutis, and myocardial infarction in a dog treated for IMT. Hsu K, Snead E, Davies J, Carr A. *JAAHA* 48:209-215, 2012.

Terbinafine: Cross-Species Antifungal

Terbinafine, a synthetic allylamine antifungal used commonly in human and veterinary medicine, is efficacious against the 3 most common veterinary dermatophytes (*Microsporum canis*, *M gypseum*, *Trichophyton mentagrophytes*), with a reported minimum inhibitory concentration of 0.03 µg/mL. Terbinafine also exhibits low minimal fungicidal concentrations against most dermatophytes, allowing for higher efficacy and lower relapse rates than those observed with itraconazole. Terbinafine absorbs well orally and, like azole antifungals, is lipophilic and concentrated rapidly in the stratum corneum, reaching high concentrations in the sebum, hair, and nails. The elimination half-life from these tissues is prolonged at 4–5 days, and terbinafine levels in nails and hairs have been shown to remain at mean inhibitory concentrations for 90 days in humans and 37 days in cats posttherapy. Thus pulsatile dosing may be useful for treating dermatophytes in these species. Topical ophthalmic preparations of terbinafine have been shown to be 89% effective in treating human fungal keratopathies, but topical formulations of terbinafine in horses and rabbits exhibited varying results. Terbinafine is associated with a low index of toxicity and few adverse effects.

Commentary

Although use of terbinafine, relatively new to veterinary medicine, is becoming more common in dogs and cats, use in exotics is limited by lack of data. Of note is the discussion of terbinafine against dermatophytosis, one of the most common causes of skin infection of small mammals and pocket pets. Data regarding efficacy to treat other fungal infections are limited, although small studies may support its use and safety. This report can be especially helpful for practitioners who treat wildlife, avian patients, and other exotic pets.—*William Oldenhoff, DVM*

Source

Therapeutic review: Terbinafine. Keller KA. *J EXOTIC PET MED* 21:181-185, 2012.

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