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THE SKIN AS DETECTOR OF ENDOCRINOPATHOLOGY

In dogs, endocrine disease can manifest with a variety of cutaneous signs. Dogs with endocrine disease are prone to develop secondary skin infections with bacteria or yeast. Also demodicosis can especially be triggered in dogs with hyperadrenocorticism and hypothyroidism. The veterinarian should be aware of an underlying endocrine disease, when these infections become reluctant. Non-healing wounds and a dull haircoat may be other detectors of endocrinopathologies.

In most endocrine disease, alopecia of the trunc with comedones is present. However, certain signs are more disease specific, as the bald rat tail in dogs with hypothyroidism. Facial myxedema leading to a sad expression is also quite typical for this disease. Hyperadrenocorticism (HAC) can occur in dogs by endogenous or exogenous (iatrogenic) etiology. Cutaneous atrophy and thinning of the epidermis allow visualization of dermal vessels. Lack of skin elasticity and fine skin folds are present. The most peculiar cutaneous manifestation of HAC in dogs is calcinosis cutis. It typically affects the dorsal neck and trunk and occasionally affects the axillary and inguinal areas. It's featured by a pruritic papular dermatitis showing hard plaques or papules on palpation with a white central area. In contrast, other species affected by HAC may show different manifestations. Skin fragility syndrome for example, is seen in cats affected by HAC. This syndrome may lead to tearing of the skin despite minimal trauma. Sex hormonal imbalances can lead to alopecia and hyperpigmentation of the skin of predominantly the trunc, medial thighs and ventral neck. Most frequently this is seen in intact male dogs, having a sertoliceal tumor or seminoma of the testicles. A similar presentation of alopecia which may or may not be due to sex hormonal imbalances is alopecia X. While the cause is still under investigation and may be multifactorial, alopecia X is likely the result of an imbalance of adrenocortical steroid hormone intermediates. Alopecia X can be considered as a cosmetic condition, since no other systemic abnormalities are present. Several treatments have been effective in regrowth of the hair coat.

Canine superficial necrolytic dermatitis is a syndrome most often associated with certain chronic liver diseases or pancreatic glucagonomas. In the latter, pancreatic islet cell tumors secrete glucagon, which leads to deprivation of skin nutrition. Crusts, ulceration and erosions are commonly seen on footpads, elbows, hocks, face, ventral abdomen and perineum. Although several therapies have been described with various successes, the overall prognosis remains poor.

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