Title: Seborrheic keratosis in a dog

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Figure 1. hematoxylin & eosin (2X)
**Morphologic diagnosis:** Seborrheic keratosis

**Microscopic description:** Expanding the epidermis is a raised, moderately pigmented and well demarcated plaque composed of small basaloid epithelial cells arranged in sheets; this is multifocally interspersed with small pseudocysts that contain lamellar keratin. There are also few small hair follicles. There is no epidermal granular cell layer and the stratum corneum is lamellar and orthokeratotic. Scattered small basaloid cells have fine golden-brown intracytoplasmic pigment (melanin granules). In addition, there are rare mitotic figures.

**Discussion:** Seborrheic keratosis (SK) is an only recently described entity in dogs. While SK is a commonly diagnosed benign epidermal neoplasm in humans, it is only rarely diagnosed in the dog. The underlying cause is not known; in humans, a hereditary predisposition is suspected. Seborrheic keratosis presents grossly with a very similar clinical picture in both humans and dogs: Lesions are typically circumscribed, raised, and variably pigmented plaques or waxy and wart-like lesions that arise in middle aged to older patients. In humans, these lesions are typically left untreated.

Papillomavirus-associated pigmented viral plaque is an important differential diagnosis in dogs; however, histologically the hypergranulosis, koilocytes and viral cytopathic effect seen with papillomavirus is absent in SK. A recent study found no evidence of papillomavirus infection in SK lesions.
Lesions of SK are solitary or multicentric. Notably, there is an abrupt transition from normal to hyperplastic epidermis that is both endophytic and exophytic. The epidermal granular cell layer is replaced by small basaloid cells with cytoplasmic melanin granules. Interspersed throughout are small keratin forming pseudocysts. The superficial cornified layer is lamellar and orthokeratotic. Mitotic activity is typically low.

In humans, sudden onset of numerous foci of seborrheic keratosis (Leser-Trélat sign) has been reported in association with internal malignancies, most commonly adenocarcinoma of the stomach. This has to-date not been reported in dogs. Leser-Trélat sign has also been reported in humans after treatment with chemotherapy as well as in association with a benign Leydig cell tumour. Sudden eruptions of multiple seborrheic warts in dogs may therefore warrant careful investigation. Histologically, in humans, there is a range of patterns including the keratotic (papillomatous), the adenoid and the acanthotic variants. Malignant change within a focus of seborrhoeic keratosis is rare but squamous cell carcinoma arising in SK has been reported.

References:


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