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Journal

Journal of the American Veterinary Medical Association, 178(12)

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Publication Date

1981-06-15

Peer reviewed

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Canine Conjunctival Angiokeratomas

ANGIOKERATOMAS are discrete, superficial telangiectasias of the skin.¹ They consist of dilated and engorged small blood vessels, with reactive hyperplasia of the overlying epithelium. In man, there are localized and diffuse types. The localized form primarily involves the extremities. The diffuse form (Fabry's disease) is characterized by widespread skin lesions associated with an inherited disorder of glycolipid metabolism. We have been unable to find any report of angiokeratoma in animals other than man. This report deals with angiokeratomas in 2 dogs.

Case 1—An 11-year-old male English (Llewelin) Setter was admitted for evaluation of a smooth, red mass that had appeared suddenly several weeks earlier on the right nictitating membrane (Fig 1). Except for slight conjunctival hyperemia and epiphora, other abnormalities were not found. The

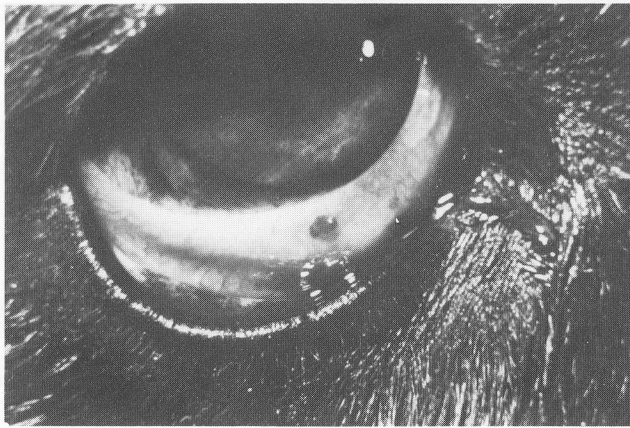


Fig 1—Angiokeratoma involving the palpebral surface of the leading edge of the nictitating membrane.

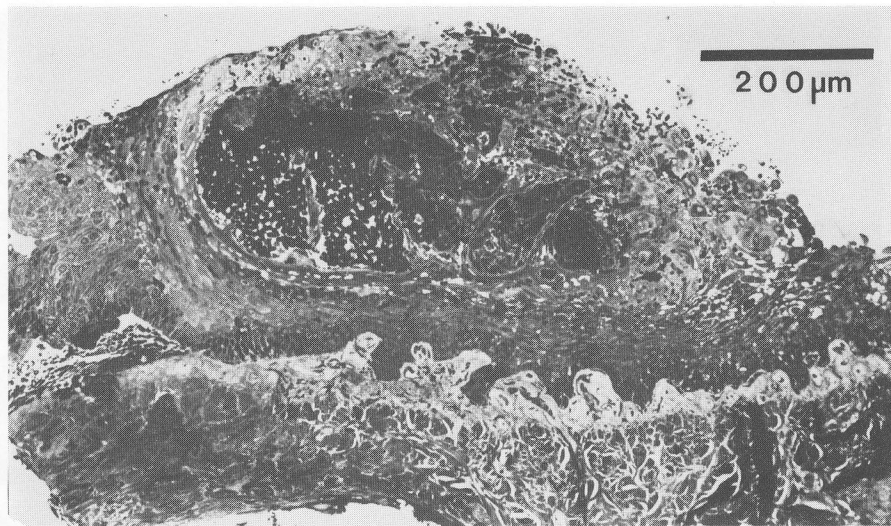


Fig 2—Photomicrograph of angiokeratoma on nictitating membrane. Notice the vascular channels surrounded by hyperplastic epithelium. Azure II-methylene blue stain.

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tentative diagnosis was conjunctival hemangioma. The mass was removed, and there was no recurrence in the next 6 months.

Microscopically, the mass consisted of large vascular channels within hyperplastic epithelium (Fig 2). The histologic diagnosis was angiokeratoma.

Case 2—A 3.5-year-old black female American Cocker Spaniel was admitted for evaluation of a black mass involving the right bulbar conjunctiva (Fig 3). The mass had been present for an undetermined period and was not associated with other ocular problems. Two large blood vessels extended into the base of the mass. The tentative diagnosis was conjunctival melanoma. The mass was removed, and there was no recurrence in the next 2 months.

Microscopically, the mass consisted of papillary projections of hyperplastic and pigmented epithelium (Fig 4). The underlying stroma contained numerous vascular spaces, many of which were greatly dilated. The histologic diagnosis was angiokeratoma.

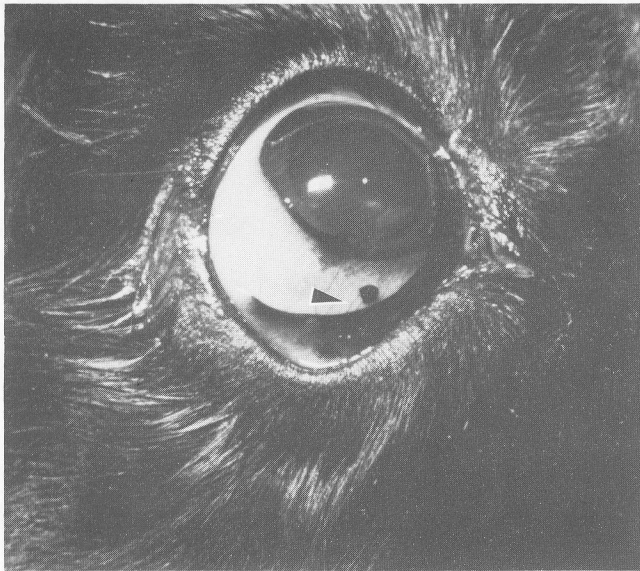


Fig 3—Angiokeratoma involving the bulbar conjunctiva. Two blood vessels extend into the ventral aspect of mass (arrowhead).

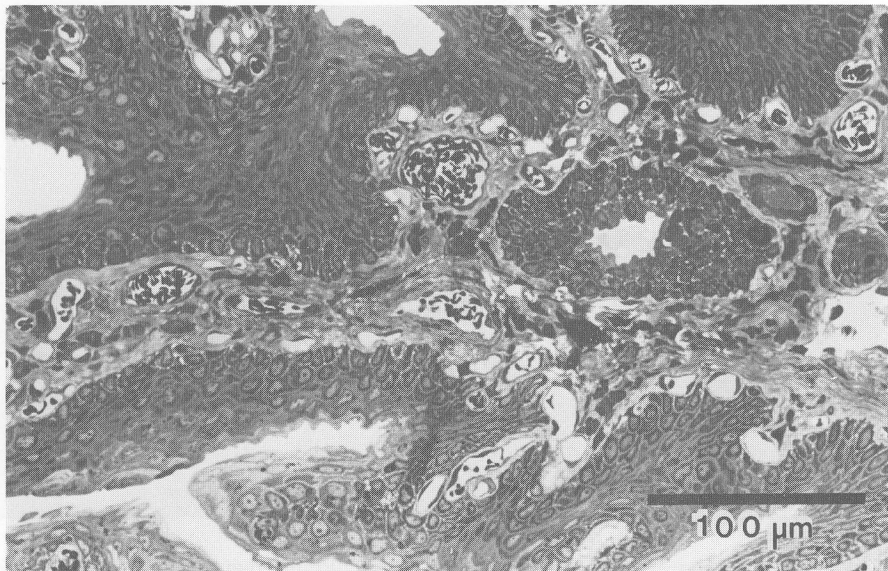


Fig 4—Photomicrograph of bulbar conjunctival angiokeratoma. Most epithelial cells contain pigment granules in their cytoplasm. Azure II-methylene blue stain.

Telangiectasias are congenital or acquired foci of abnormally dilated capillaries, venules, and arterioles.² These masses are small and usually occur in the skin and mucous membranes. Angiokeratomas differ from other telangiectasias in that they are associated with secondary epithelial hyperplasia.³ What induces this change is unknown.

Angiokeratomas in human beings begin as soft papules. Depending on the degree of melanization of the overlying epithelium, angiokeratomas may appear red to dark black. The red lesions are frequently mistaken for hemangiomas and the black ones for melanoma, as exemplified by these 2 canine cases. Angiokeratomas with extensive epithelial change may develop a

verrucous surface and may be confused with viral papilloma or squamous cell carcinoma.

The angiokeratomas reported here appear to be comparable with the localized form in human beings inasmuch as the lesions were singular and not associated with systemic signs. The angiokeratomas were unusual in that they developed on the conjunctiva. Although there have been various vascular anomalies of the conjunctiva reported in Fabry's disease, angiokeratomas have not been a feature.⁴

The medical history in both cases would indicate that the lesions were acquired. In case 2, the 2 "feeder" vessels suggest an underlying congenital vascular anomaly.

In human beings, the behavior of angiokeratomas is benign. Their behavior appears to be similar in the dog. However, excision with histologic examination is the only reliable means of differentiating them from neoplasms. The clinician should be aware of these benign disturbances, so that a proper prognosis can be rendered.—Ned Buyukmihci, VMD, and Anthony A. Stannard, DVM, PhD, School of Veterinary Medicine, University of California, Davis, CA 95616.

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