Arteriovenous hemangioma affecting the anterior surface of the eye and the oral cavity in a cat.

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**Definition:** Arteriovenous hemangioma is a mass lesion composed of proliferating vascular structures lined by endothelial cells with variable amounts of fibrous tissue and smooth muscle cells.¹

**Abstract**

**Purpose:** We document the case of a cat with a severely destructive anterior segment ocular mass and an oral mass both diagnosed as arteriovenous hemangioma - a rare tumor most often diagnosed in the skin.

**Methods:** This case was submitted to the Comparative Ocular Pathology Laboratory of Wisconsin for diagnosis and interpretation. H&E, Alcian Blue-PAS, and Trichrome stains were performed. Immunohistochemistry for smooth muscle actin was performed.

**Results:** A seven-year-old female cat presented because of a progressive ocular deformity in the left eye, which had progressed over a one month period. The cat was unable to close the affected eye. An oral mass on the rostral mandibular gingiva was found at the time of enucleation and was removed also. Grossly the anterior segment of the globe was markedly distorted and effaced by a mottled tan to red mass affecting the limbus, half of the cornea and filling most of the anterior chamber. The remainder of the globe was unaffected. Histologically, the mass was characterized by large interconnected vascular structures often surrounded by disorganized plump spindle cells resembling smooth muscle. This impression was confirmed by immunohistochemistry for smooth muscle actin. The histology of the gingival mass was identical. The diagnosis was ocular and oral arteriovenous hemangioma. Two other cases of arteriovenous hemangioma were also found in the COPLOW collection, both from the skin near the eye.

**Conclusions:** Arteriovenous hemangioma is reported in dogs, cats, and humans. It is a rare benign tumor most often diagnosed on the skin. One case is reported from the tongue of a dog but this is the first case reported from the eye.

**References**