Abstract
Squamous cell carcinoma (SCC) is a neoplastic disease of the squamous epithelial cells that has been rarely described in the literature. This neoplasm affects the eyelid, conjunctiva and third eyelid, as well as the cornea. Corneal SCC is a neoplastic lesion characterized by a pink, typically irregular mass protruding from the epithelial surface of the cornea. Canine corneal SCC has been associated with chronic keratoconjunctivitis sicca, or keratitis secondary to exophthalmia and is common in humans, horses and cows. The treatment is surgical with excision of the lesion of the ocular surface. This paper reported a study of a dog with corneal SCC, which was successfully treated with a superficial lamellar keratectomy excision combined with cryosurgery. Case: An 8-year-old male English bulldog was presented for the evaluation of a red mass on its left eye that had progressively grown over a 1-year period. The mass was approximately 6mm in diameter and it was elevated from 3 to 4 mm above the corneal surface with no expansion onto bulbar conjunctiva. At physical examination it was normal except for the ocular disease. A complete blood cell count and serum chemical profiles were unremarkable. The radiographic evaluation did not demonstrate any evidence of metastasis. The mass was excised by a superficial lamellar keratectomy and the surgical bed was frozen with nitrous oxide. The surgical procedures consisted in excising a rim of grossly normal conjunctiva with 2mm along the mass that was sent for histopathological examination. The postoperative measures included the administration of topical tobramycin at 0.3%, four times a day, and systemic carprofen 4 mg/kg, daily, for 5 days. A reexamination was performed after 14, 21, 30, 42, 70 and 180 days postoperatively. When the cornea was healed, topical dexamethasone at 1% was prescribed, twice a day for 2 weeks to control an excessive vascularization at the limbus. In 70 days, the postoperative result was very satisfactory and there was no evidence of ocular inflammation. Two years after the surgical procedure the dog had not developed metastasis or recurrence of the ocular neoplasm. Discussion: Ocular or adnexal SCC in animals and humans is suspected to be a result of the chronic effect of ultraviolet light on the epithelium. Also, in dogs the SCC has been associated with a chronic source of irritation. The dog observed in our study was brachycephalic, with natural exophthalmic eyes and oversized palpebral fissures that may have caused excessive and chronic corneal exposure to solar radiation. The treatment of choice was excision of the lesion with a wide surgical margin, because it is the standard treatment for SCC of the cornea and cryotherapy has been a common modality of treatment. A histological examination revealed islands and nests of pleomorphic epithelial cells and keratin pearls and the diagnosis of the corneal SCC was made. No evidence of metastasis or recurrence has been found since the surgical procedure. Although, recurrence rates following the excision of this neoplasm of the ocular surface ranged an average of 30%. The treatment of the
neoplasm was successful in both procedures, once no visible evidence of regrowth presented two years after the keratectomy. Despite being a rare entity, squamous cell carcinoma of cornea should be considered as differential diagnosis in dogs with any corneal mass.

**Keywords**

Ocular neoplasm, canine, lamellar keratectomy, cryotherapy.