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Oncocytoma of the Lacrimal Caruncle

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To the Editor:

Oncocytomas are neoplasms that originate in the glandular and secretory epithelia.¹ Histologically, the masses are composed of polyhedral cells of granular eosinophilic cytoplasm, which presents abundant mitochondria when examined ultrastructurally.¹ In cutaneous presentations, the most common sites are the ocular caruncle and medial eyelid canthus.²

The incidence of neoplasm in the caruncle is around 3% of all tumor ocular biopsies from adnexa. Ostergaard³ published a Danish series spanning 25 years that included 574 biopsies of caruncular lesions, reporting an incidence of 2.8%. In another series of 466 biopsies of the caruncle reported by Pecorella,⁴ the incidence of oncocytoma was 2.7%. This tumor is more common among older adults and women: the average age at presentation is 73 years and 5 times more women

than men are affected.⁴ Biologically, the tumor is benign, although malignant oncocytomas have been described.⁵

We describe an 82-year-old man who attended an ophthalmology clinic in Colombia for a cystic lesion that had been growing on the inner area of the left eye for 1 year and presented occasional bleeding. The physical examination revealed a rounded polypoid lesion measuring 7 mm across in the caruncle of the left eye. The lesion was highly vascularized, but there was no involvement of the skin of the palpebral fold. The mass was surgically removed.

The anatomical pathology department received a fragment of tissue partially lined with epidermis that measured 1.2×1.1 cm at the largest diameter. The fragment contained a strongly vascularized reddish-brown polypoid lesion of 0.7×0.6 cm at the cross diameter. Tissue sections with

hematoxylin eosin stain showed an area of palpebral and bulbar conjunctiva corresponding to the area of the caruncle. The lamina propria contained a benign tumor of epithelial origin composed of polyhedral cells with a slightly hyperchromatic central nucleus and eosinophilic granular cytoplasm, with well-circumscribed cell borders. The cells were arranged in solid nests associated with vascular congestion and foci of microhemorrhaging (Figure 1). Periodic acid-Schiff staining revealed an intense granular acidophilic content in the cytoplasm, corresponding to the high number of mitochondria (Figure 2).

The lesion was diagnosed as an oncocytoma of the lacrimal caruncle.

Oncocytoma, also known as an oncocytic tumor or oxyphilic cell adenoma, is a tumor that originates in the cells of glandular and secretory epithelia. Oncocytomas have been



Figure 1. Benign tumor lesion of epithelial origin composed of polyhedral cells of granular eosinophilic cytoplasm and central nucleus, arranged in a solid pattern. (Hematoxylin-eosin, ×10).



Figure 2. Numerous intracytoplasmic granules positive to periodic acid-Schiff staining with the high number of mitochondria characteristic of oncocytic lesions can be seen. (Periodic acid-Schiff, ×100).

described at different sites, mainly the salivary, parathyroid, adrenal, and thyroid glands, kidneys, gastrointestinal system, and ocular adnexa.^{1,2} The most common site in the eyes is the caruncle and the inner canthus of the eyelids, although the condition has also been reported in the lacrimal gland and conjunctiva.⁶

Oncocytomas of the caruncle are slow-growing lesions that reach an average size of 2 to 5 mm and may be solid or cystic.² The lesions are asymptomatic, but may occasionally be accompanied by an inflammatory response and become reddish. They are usually removed to establish diagnosis and for cosmetic reasons.⁷

Histologically, oncocytomas are characterized by the presence of polyhedral cells, with abundant granular and eosinophilic cytoplasm⁸ (Figure 1). The cytoplasm stains with periodic acid-Schiff reagent and phosphotungstic acid (Figure 2). The cells show positive antibody reactions to low-molecularweight cytokeratins; some of the tumor cells are diffusely positive for carcinoembryonic antigen. The cells are not immunoreactive to vimentin, CD68, S100 protein, or HMB-45 monoclonal antibodies.^{1,2} Electron microscopy has shown that the cytoplasm of these cells is occupied by large quantities of mitochondria filled with crystals.1

The differential diagnosis should be established with benign masses of inflammatory origin, papilloma, dermoid and epidermoid cyst, basal cell carcinoma, angioma, and pyogenic granuloma.²

Oncocytomas of the caruncle rarely recur and are classified as biologically benign, although cases of malignant oncocytoma of the eyelid, known as oncocytic carcinomas, have been reported.⁵ These oncocytomas differ from benign oncocytomas in their cellular atypia, invasive nature, and development of recurrences and metastasis. In our patient, lesions had not recurred after 6 months of clinical follow-up.

In conclusion, our literature review did not reveal any reports of this disease

in Colombia and, therefore, we present the first case of this lesion in our country. This tumor should be considered when performing the differential diagnosis of slow-growing lesions in the caruncle of elderly patients. The tumor is benign and complete resection is the definitive treatment.

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