White papules in lower right eyelid as a manifestation of mucoepidermoid carcinoma

Jorge Magdaleno-Tapial, MD,[a] Cristian Valenzuela-Oñate, MD,[a] Alicia Gracia-García, PhD,[b] Álvaro Martínez-Doménech, MD,[a] Marta García-Legaz-Martínez, MD,[a] José Luis Sánchez-Carazo, PhD,[a] Víctor Alegre-de Miquel, PhD,[a] and Amparo Pérez-Ferriols, PhD[a]
Valencia, Spain

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INTRODUCTION

Squamous cell carcinoma (SCC) is the most common malignancy of the ocular surface. It is part of a pathologic continuum called ocular surface squamous neoplasia that includes localized lesions confined to the surface epithelium (dysplasia and intraepithelial neoplasia) and invasive SCC that invades the underlying stroma.[1] Mucoepidermoid carcinoma (MEC) is a rare variant of conjunctival SCC and accounts for only 0.3% of all premalignant and malignant squamous lesions.[1] It is typically aggressive, with a higher propensity than SCC for local invasion and recurrence after treatment.[2] We report a subtle case of MEC in the lower eyelid conjunctiva that was managed with local excision and cryotherapy.

Abbreviations used:

MEC: mucoepidermoid carcinoma
PAS: periodic acid—Schiff
SCC: squamous cell carcinoma

CASE REPORT

A 74-year-old woman presented to the ophthalmology department with a 2-month history of bloody secretions and redness of the right eye. She had a history of hypertension, type 2 diabetes, morbid obesity, dyslipidemia, and breast cancer (free of disease for 8 years). Physical examination showed 2 white papules in the conjunctiva of the right lower eyelid (Fig 1) that were diagnosed as pyogenic granuloma. An eyelid biopsy was performed. Histologic study showed a moderately differentiated SCC with numerous mucous cells and mitotic figures (Figs 2 and 3). Period acid-Schiff (PAS) stain highlighted areas of glandular differentiation (Fig 4). The patient was treated with local excision and adjuvant cryotherapy. Six months later, extensive clinicoradiologic workup, including brain and orbit magnetic resonance images, did not show any residual tumor or metastases.

DISCUSSION

MEC is a tumor that typically affects the major salivary glands and the upper respiratory tract; however, in rare instances it may also arise from the conjunctiva or eyelid.[3] Although they are usually assessed by an ophthalmologist, patients may initially consult a dermatologist, and histopathologic samples may be sent for evaluation by a dermatopathologist.

Clinical lesions of conjunctival SCC have a leukoplakic or gelatinous appearance, starting in the bulbar conjunctiva near the limbus and extending across it to involve the cornea or eyelids.[4] However, they can also present with diffuse involvement of the conjunctiva that appears persistently red, masquerading as chronic conjunctivitis.[3] Therefore, a high degree of suspicion is mandatory in every atypical case of eye redness or lesions, and early biopsies must always be performed. MEC cannot be clinically distinguished from other ocular surface squamous neoplasias, but it is more aggressive. It generally occurs as a limbal lesion around the seventh decade of life, with men more commonly affected than women.[5]

From the Dermatology Department[a] and the Ophthalmology Department, Consorcio Hospital General Universitario de Valencia.[b]

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Correspondence to: Jorge Magdaleno-Tapial, MD. E-mail: jormagta@gmail.com.

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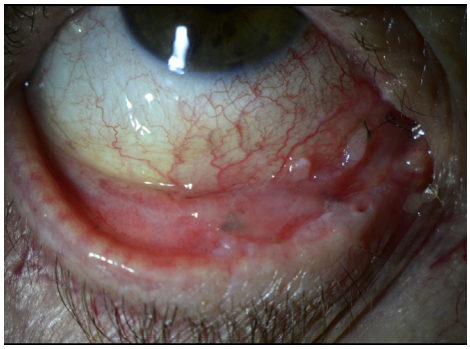

Fig 1. White papules in the conjunctiva of the lower right eyelid were observed.

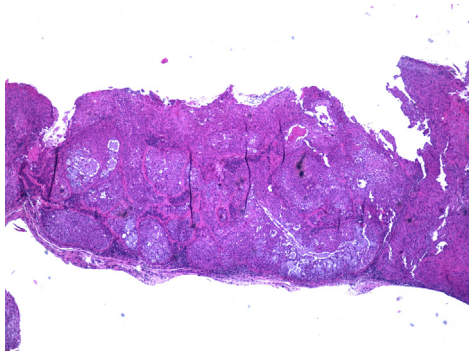

Fig 2. Tumor constituted by intermixed epithelial cell cords and vacuolated basophil cells (hematoxylin-eosin stain; original magnification, ×10).

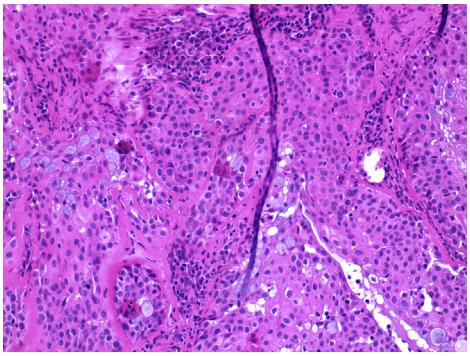

Fig 3. Vacuolated basophil cells and epidermoid carcinoma (hematoxylin-eosin stain; original magnification, ×40).

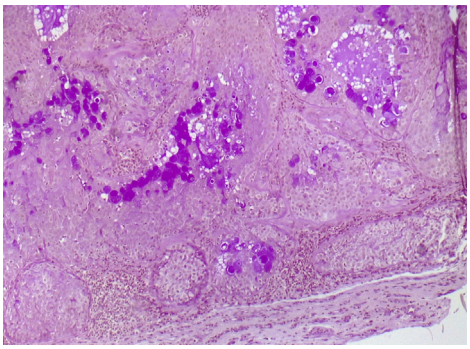

Fig 4. Special stains for mucin highlight areas of glandular differentiation (periodic acid—Schiff stain; original magnification, ×40).

Histologically, MEC is characterized by areas of conventional invasive SCC with mucous-producing cells often arising multifocally from the overlying epithelium. Nuclear pleomorphism and mitotic figures are frequent features in both the squamous and glandular areas. These tumors are often deeply invasive, and perineural infiltration is frequently evident. Additional features include superficial keratocysts and overlying ulceration.[6] Special stains for mucin, including PAS or Alcian blue, and immunohistochemistry for carcinoembryonic antigen highlight areas of glandular differentiation.[7] MEC may be missed on histopathologic examination, especially if these stains for mucin are not routinely performed.

Several treatments have been described in the literature. The most recommended is local excision followed by adjuvant cryotherapy, topical chemotherapy, or radiotherapy.[8] Exenteration/enucleation is required in 65% of cases for local control of the tumor.[3] Lymph node involvement has been described, but distant metastases are unusual if the tumor is treated aggressively.[4] Johnson et al[9] reported 2 cases of MEC presenting with cervical lymph node metastases in a series of 30 invasive secondary orbital SCCs that were treated with exenteration and radical neck dissection. Selective biopsy of the sentinel lymph node could help with determining the stage of the disease.[10]

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