·Letter to the Editor·

Apocrine hidrocystoma of the conjunctiva

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Dear Sir,

I am Dr. Boyun Kim, form the Department of Ophthalmology, Bucheon St. Mary's Hospital, Bucheon, Korea. I write to present a case report of apocrine hidrocystoma on temporal bulbar conjunctiva.

Apocrine hidrocystoma (AH) is a benign cutaneous cystic nodule arising from apocrine glands of Moll [1]. This lesion usually occurs on eyelids and canthus [1,2], ears, chest, shoulders in adults but its occurrence in conjunctiva [3] is rare. Typical histopathologic findings include an inner layer of cuboidal to columnar cells with eosinophilic cytoplasm with apical decapitations, and Periodic acid-Schiff (PAS) -positive, diastase-resistant granules on their apical surfaces with myoepithelial cell layers [1-5].

A 54-year-old female presented with a painless, enlarging, cystic mass on the right temporal conjunctiva for 1 month. She had histories of diabetes and hypertension and habitually rubbed her eyes due to allergy. Slit-lamp biomicroscopy revealed a fluctuant, palpable 6×5mm-sized gray-brown cystic mass with hemorrhagic hues on temporal conjunctiva. After instillation of topical 0.1% Olopatadine ophthalmic solution (Patanol®, Alcon Inc, Fortworth, USA), yellowish-gray-brown color was pronounced (Figure 1A). Complete excision was performed with impression of inclusion cyst. Histopathology revealed a uni-loculated cystic lesion with its luminal secretory contents and a few papillary projections into the lumen (Figure 1B, C). Luminal surface was lined by multiple layers of nonkeratinizing tall columnar cells with eosinophilic cytoplasm with luminal apical decapitation secretions and outer flat myoepithelial cell layers (Figure 1D). PAS-positive, diastase-resistant granules were identified in the secretory cells (Figure 1E). Immunohistochemistry of α -smooth muscle actin showed positive on myoepithelial cell layers of cyst wall (Figure 1F),

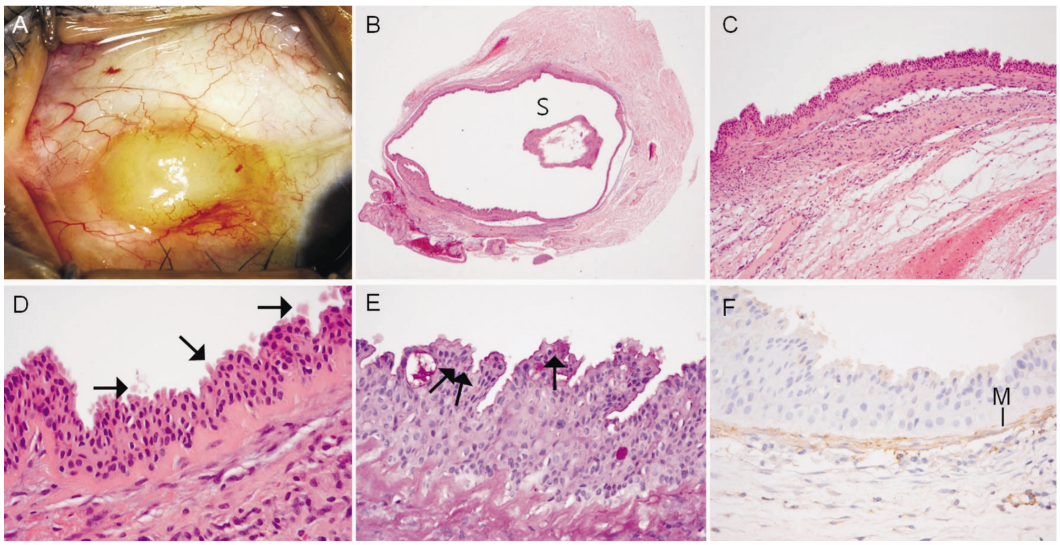

Figure 1 A yellowish gray-brown elevated cystic mass on temporal temporal conjunctiva (A) and histological studies showing the characteristic findings of apocrine hidrocystoma: A uni-loculated solitary cyst with its luminal secretory content (S) (H-E stain, ×20) (B): papillary projections of the inner surface of cyst wall (H-E stain, ×40) (C): The luminal surface lined by multiple nonkeratinizing tall columnar cell layers with eosinophilic cytoplasm with luminal apical decapitation secretions (arrows) and outer flat myoepithelial cell layers (H-E stain, ×100) (D): PAS-positive, diastase-resistant granules (arrows) within cytoplasma of secretory cells (PAS with diastase stain, ×100) (E): α-smooth muscle actin immunostaining positive outer myoepithelial cells (M) (×100) (F).

diagnosed AH of the conjunctiva. Examination after 6 months showed no sign of recurrence.

Conjunctival AH is rare tumor with only two cases previously reported in the literature [3]. These cases presented adjacent to caruncle, while ours presents on the temporal conjunctiva. Those cases were located in nasal conjunctiva, one with bluish-gray color and the other with subconjunctival melanosis and showed relatively rapid growth of 1week and 5 month in patients with history of cutaneous basal cell carcinomas [3]. Our case is the second report of AH of the conjunctiva and it is the first reported AH presenting on temporal conjunctiva. There was no evidence of basal cell carcinoma in our patient. Clinical and histopathologic findings were compatible with diagnosis of AH and identical to previous reports [1-5]. We speculate the development of AH on temporal conjunctiva as an accidental implantation of secretory cells of Moll in eyelid margin into the conjunctival surface due to patient's habitual rubbing of eye and eyelids, and the multiple layers of tall columnar cells as innermost lining cells with myoepithelial layers of our case seems to be the results of cystic dilatation of secretory glands. Because a cyst of ductal origin generally has a double layer of nonkeratinizing flattened cuboidal epithelium [1, 2, 5].

AH varies from skin color to grayish or blue-black [1-4]. Blue-gray coloration is caused by lipofuscin-rich fluid contents and Tyndall's phenomenon [1-5]. Our patient presented with a yellowish-brown-gray colored lesion which was different from previous reports, but might be one of characteristic clinical variations of hidrocystoma as Farah *et al* [6] pointed that light pigmented lesions, gray, and reddish-brown lesions were commonly seen in Japanese literature. Differential diagnosis of conjunctival cystic tumors should be considered such as conjunctival inclusion cyst (which contains goblet cells) [5], epidermoid cyst and eccrine hidrocystoma. In eccrine hidrocystoma, flattened epithelium with absence of columnar cells and few papillary projections are typical and it is frequently associated with multiple lesions [1, 2]. AH is believed to be mostly benign, it could slowly enlarge. Treatment is surgical excision.

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