

CASE REPORT

# Different Types of Conjunctival Papilloma Presenting in the Same Eye

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## ABSTRACT

A 31-year-old Black man presented with two oval masses in his right conjunctiva. The tumors were completely excised and histology showed that the inferior lesion was a conjunctival squamous papilloma with pigmentation while the superior one was an inverted conjunctival papilloma, which grew in an endophytic manner. Follow up examination one year later showed no recurrence. Literature search revealed no previous report of simultaneous appearance of these types of papilloma in the same eye. Management of conjunctival squamous papillomas is difficult and is complicated by multiple recurrences in contrast to inverted conjunctival papillomas where no recurrences have been reported after complete excision. Thus, histopathology is an absolute necessity even when papillomas appear in the same eye.

**KEYWORDS:** Squamous papilloma; Inverted papilloma; Conjunctiva; Histology

## INTRODUCTION

Conjunctival squamous papillomas may be either exophytic or, much more rarely, inverted. Clinically, these lesions may occur anywhere on the conjunctival surface (Grossniklaus et al., 1987). To the best of our knowledge we report the first case of simultaneous presence of both types of squamous papilloma in the same conjunctiva, which did not show any recurrence in 12 months' follow-up after complete excision.

## Case Report

A 31-year-old Black man, who was born in Africa, was referred to the Adnexal Clinic of Ophthalmology Department in Athens in August 2008. He was presented with two ovoid lesions in his right conjunctiva and increased epiphora. The upper lesion was located

in the bulbar conjunctiva and was a fleshy mass that has been expanding for one year. The other was a cauliflower-like, darkly pigmented, pedunculated tumor protruding from the conjunctiva of the inferior fornix slightly larger than the superior and increasing in size over a period of 4 years. (Fig. 1 A&B) His visual acuity was 20/20 in both eyes and the routine ophthalmologic examination did not reveal any further pathology. There was no previous history of condylomata acuminata (genital warts) was mentioned and past medical history was unremarkable. Blood and serology tests were negative for Human Immunodeficiency Virus 1&2 (HIV 1&2), Hepatitis B virus (HBV) and Hepatitis C virus (HCV).

The tumors were excised without cryotherapy. Histopathologic examination demonstrated that the upper mass (1.1 cm × 0.9 cm × 0.3 cm) was an inverted conjunctival papilloma which grew in an endophytic manner, also known as benign mucoepidermoid papilloma of the conjunctiva; many lobules of benign epithelial cells with numerous mucin-secreting goblet cells extend into the underlying connective tissue layer (Fig. 2A). The findings from the inferior, larger mass (1.5 cm × 0.9 cm × 2 cm) were consistent with a pigmented squamous papilloma of the conjunctiva.

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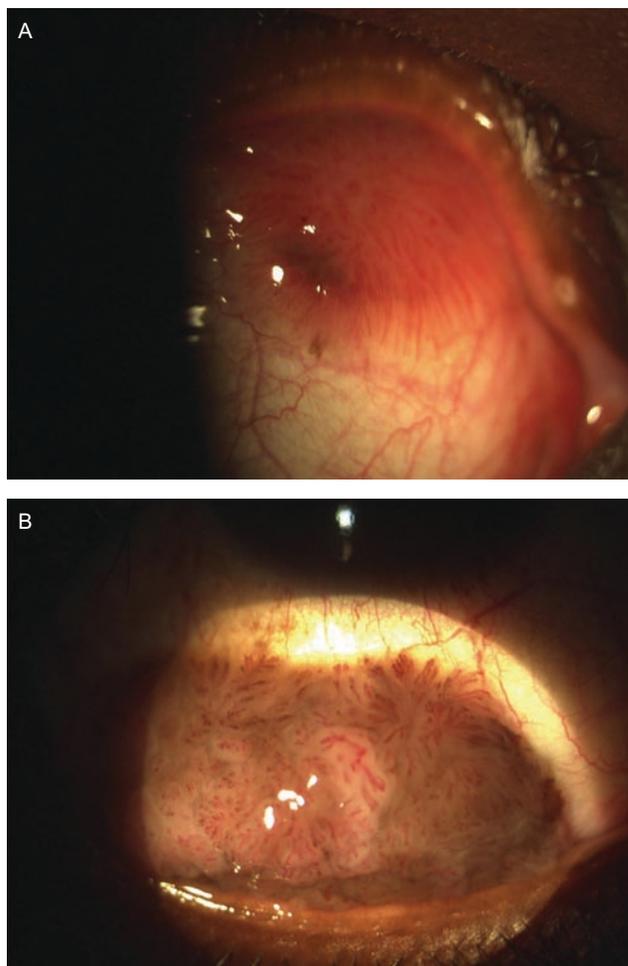


FIGURE 1 (A) Inverted squamous cell papilloma in the bulbar conjunctiva. (B) Pigmented squamous cell papilloma expanding from the inferior fornix.

There were some tumor cells containing melanin pigment, while some goblet cells were noted.

Lastly, some melanin laden histiocytes were observed in the lamina propria (Fig. 2B). No koilocytosis was found in the tumors and the investigation of the specimens for the presence of human papilloma virus (HPV) types 6, 11 and 16 with Polymerase Chain Reaction (PCR) was negative. Both lesions were completely excised with free surgical margins. Follow-up examination 12 months later showed no recurrence.

## COMMENT

Conjunctival squamous papillomas are unilateral or bilateral benign lesions that may arise anywhere on the conjunctiva. Clinically, these lesions may be of 2 completely different types; either exophytic or much more rarely inverted / endophytic origin (Grossniklaus et al., 1987). Etiological factors include ultraviolet light, smoking, HPV infection and immunodeficiency. The

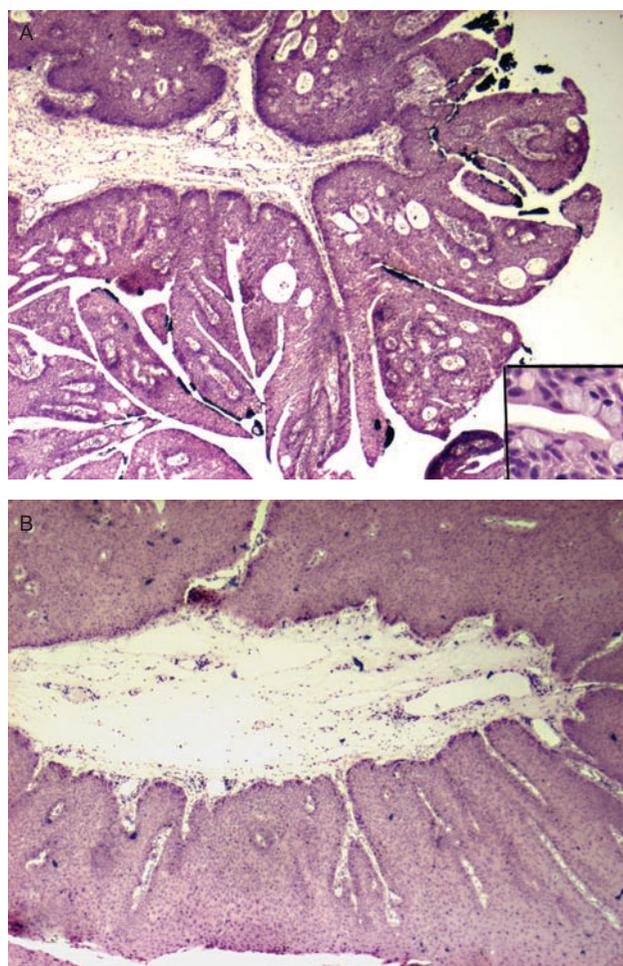


FIGURE 2 (A) This low magnification shows a squamous cell papillary lesion characterised by inverted growth with projection to the lamina propria (H&E staining, 10x magnification). (B) Squamous cell papilloma with exophytic type of growth (H&E staining, 10x magnification). Amongst squamous cells some goblet cells are noted (insert 100x magnification).

presence of multiple lesions is especially suggestive of an infection with HPV; subtypes 6,11,16,18 and 33 are the commonest ones (Peck et al., 2006; Sjo et al., 2007).

Pigmentation may be present in darkly pigmented individuals. This holds true in darkly pigmented individuals, as seen in this case. Histopathologically, these lesions show acanthotic, non keratinizing squamous epithelium and behave in a benign fashion. Melanocytes and goblet cells are variably present. Management of papillomas is difficult and is complicated by multiple recurrences, especially in children. Multiple regimens including  $\alpha$ -interferon and mitomycin-C have been tried with variable success (de Keizer and de Wolff-Rouendaal, 2003; Yuen et al., 2002).

The most effective treatment is simple excision with cryotherapy to the base and surrounding area of the lesion. In our case the inferior mass was identified as

a pigmented squamous papilloma of the conjunctiva, which showed no recurrence following complete excision within a 12-month follow-up period. It is not unusual that pigmentation is present in individuals with dark-colored skin, but it is infrequent that such a lesion shows no recurrence within a year after complete excision without application of cryotherapy or mitomycin-C.

Inverted conjunctival papilloma, which is a distinct clinical entity, is a rare variant of the conjunctival squamous papillomas and is also known as benign mucoepidermoid papilloma of the conjunctiva; the later lesion grows in an endophytic manner (Streeten et al., 1979). It is benign and not precancerous, in contradiction to the inverted papilloma of the nasal tract. It consists of folds of papillomatous epithelium that invaginate into the underlying stroma. The gold standard for treatment is complete excision since no recurrence has been reported following such treatment. The superior lesion in our patient was diagnosed as conjunctival papilloma with endophytic growth and responded excellently to surgical excision as it was expected.

Our case report focuses on the fact that two different types of squamous conjunctival papilloma can present simultaneously in the same eye. Due to the diversity

in nature, therapeutic approach and prognosis of these lesions, it becomes obvious that specimens must always be sent for histopathology examination.

**Declaration of interest:** The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

## REFERENCES

- de Keizer RJ, de Wolff-Rouendaal D. Topical a-interferon in recurrent conjunctival papilloma. *Acta Ophthalmol Scand* 2003;81:193–196.
- Grossniklaus HE, Green WR, Luckenbach M, Chan CC. Conjunctival lesions in adults and histopathological review. *Cornea* 1987;6:78–116.
- Peck N, Lucarelli MJ, Yao M, et al. Human papilloma virus 6a lesions of the lower eyelid and genitalia. *Ophthalm Plast Reconstr Surg* 2006;22:311–313.
- Sjo NC, von Buchard C, Cassonnet P, et al. Human papillomavirus in normal conjunctival tissue and in conjunctival papilloma: types and frequencies in a large series. *Br J Ophthalmol* 2007;91:1014–1015.
- Streeten BW, Carrillo R, Jamison R, et al. Inverted papilloma of the conjunctiva. *Am J Ophthalmol* 1979;88:1062–1066.
- Yuen HK, Yeung EF, Chan NR, et al. The use of postoperative topical mitomycin C in the treatment of recurrent conjunctival papilloma. *Cornea* 2002;21:838–839.