

Case Report

Large conjunctival mass

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Abstract

Background: Conjunctival papilloma is a benign growth of the conjunctival epithelium. It usually presents as a multi-lobular strawberry red lesion with glistening appearance. Recurrence is one of the complications after treatment.

Objective: To report a large pigmented, brownish, conjunctival lesion which mimic conjunctival melanoma and its management.

Methods: Case report

Results: A 60-year-old gentleman presented with a 4-year history of gradually enlarging pigmented growth on the left cornea. It was painless with minimal bleeding. On examination, the visual acuity was 6/48 in the left eye and 6/20 in the right eye. He had a large brownish, lobulated mass arising from the left inferior fornix, covering the medial half of the cornea. The size of the mass was about 16mm X 13mm. The mass was associated with multiple feeder vessels from the nasal bulbar conjunctiva. Incisional biopsy was done and the lesion was reported as benign epithelial melanosis. Subsequently, excisional biopsy with amniotic membrane transplantation was performed. Histopathology of the tumour revealed conjunctival papilloma.

Conclusion: Incisional biopsy should be done when malignancy is suspected. Excision biopsy with amniotic membrane transplantation is an alternative option for the treatment of large conjunctival papilloma with cornea involvement.

Keywords: conjunctival papilloma, pigmented conjunctival mass, amniotic membrane transplant, conjunctiva, cornea.

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Introduction

Conjunctival papilloma is a benign, vascularized epithelial tumor.¹² Conjunctival papilloma usually presents as a multi-lobular strawberry red lesion with glistening appearance, which can be pedunculated or sessile. It commonly has an exophytic growth pattern.³ It occurs more in male and the incidence is highest among patients aged 20–39 years.⁴ The most common location of the tumor was caruncle in adults.³

Primary treatment include cryotherapy, excisional biopsy and cryotherapy, topical interferon alfa-2b, photodynamic therapy, oral cimetidine, excisional biopsy and cryotherapy with adjuvant topical or injection interferon alfa-2b, and adjuvant oral cimetidine.³ We report the management of a large conjunctival papilloma which have not shown any recurrence after complete excision for 12 months.

Case Report

A 60-year- old man presented with gradual painless growth over the left eye for the past 4 years. He did not have eye pain, eye discharge, eye swelling or blurring of vision. He had no symptoms of loss of weight or loss of appetite.

On examination, vision in the right eye was 6/20 and in the left eye was 6/48. There was a pigmented, dark brownish, and lobulated growth. The mass covered the limbal area from 4 - 12 O'clock and encroached centrally to cover more than half of the corneal surface. The size of the mass was about 16mm X 13mm. There were multiple feeder vessels arising from the nasal border of the conjunctiva. The remaining part of the anterior segment and posterior segment were normal. [Figure 1]

Initial diagnostic incisional biopsy was done and revealed benign epithelial melanosis. Immunohistochemistry showed the tissue is negative for HMB-45 and Melan-A.

Excisional biopsy was performed and hemostasis secured with diathermy. Amniotic membrane transplantation (AMT) with bandage contact lens was done to cover the large epithelium defect. [Figure 2-3] Postoperatively, patient was started on dexamethasone 0.1% 2 hourly, artificial tears 2 hourly and ciprofloxacin 0.3% 4 hourly. Bandage contact lens was removed after the cornea absorbed the AMT. The topical steroid and antibiotic were tapered over 8 weeks. Histo-pathological examination of the excised lesion [Figure 4-5] revealed a papillomatous growth with no malignancy detected. Follow-up examination up to 12 months later showed no recurrence.

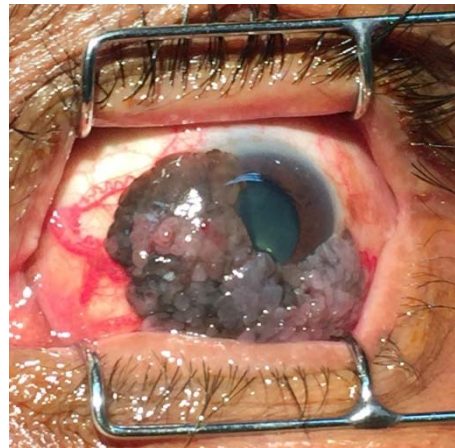


Figure 1. A large brown papillomatous lesion extending from inferior fornix covered more than half of the cornea. Prominent feeder vessels were seen nasally. The size was about 16mm x 13mm.

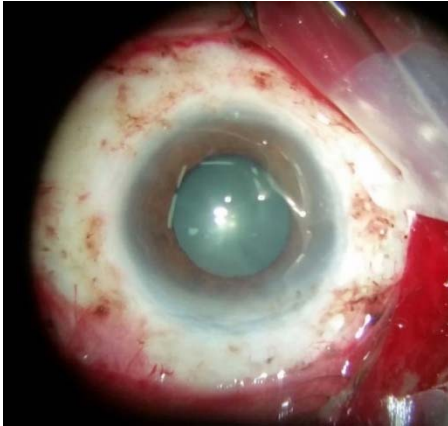


Figure 2. Intra-operatively, the mass was removed and cornea epithelium was debrided.



Figure 3. Post amniotic membrane transplantation and bandage contact lens.

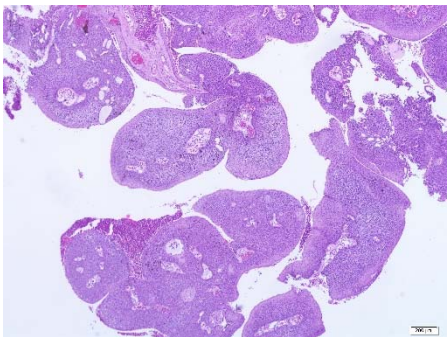


Figure 4. (X4 magnification) HPE with hematoxylin and eosin stain. Papillomatous lesion composed of proliferation of basaloid and squamous cells with the presence of few small horn cysts

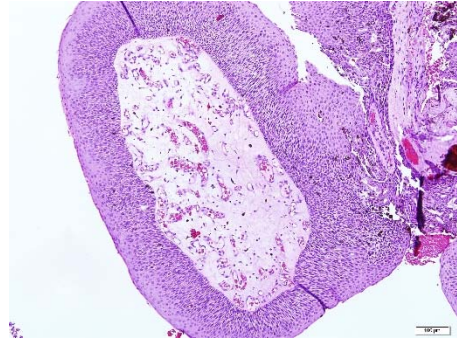


Figure 5. (X10 magnification) with hematoxylin and eosin stain. Few pigmented melanocytes are seen at the basal layer of the lesion. The sub-epidermal layer is oedematous with presence of few dilated vessels. No malignancy was seen. No cytopathic effect was seen

Discussion

Fifty two percent of conjunctival tumors are benign.⁴ Malignant tumors tend to occur in older patients and demonstrate greater basal diameter and thickness, compared with benign counterparts.⁴ For this patient, incisional biopsy was initially done to rule out malignancy as the mass was large with the presence of feeder vessels. The first histo-pathological examination (HPE) was reported as benign epithelial melanosis. Benign epithelial melanosis is pigmentation restricted to the basal layer of the epithelium and is absent of nest formation.⁵ Thus clinically, they usually presented with flat, not inflamed, non-vascularised brown pigmented lesion.

Excision biopsy was offered for this patient as conjunctival melanoma could not be ruled out and the mass was huge and disfiguring. In order to accelerate cornea healing, amniotic membrane transplantation was also planned. Topical dexamethasone 0.1% was given 2 hourly to reduce the inflammation. Topical artificial tears preservative free 2 hourly and ciprofloxacin 0.3% 4 hourly were given. Bandage contact lens was removed after AMT had been absorbed. Topical

steroid and antibiotic were tapered over 8 weeks.

Amniotic membrane is a translucent biological product, which originate from the innermost layer of fetal membranes of the placenta. It acts as a biological bandage having properties like anti-inflammatory, antimicrobial, anti-fibrotic, anti-angiogenic and source of growth factors.⁶

HPE post excision biopsy revealed conjunctival papilloma with melanocytes, which explained the dark brown colour of the conjunctival mass. Pigmented conjunctival papilloma present in darkly pigmented individuals was reported.^{7,8} This holds true in this case. Both pigmented conjunctival papilloma involved inferior fornix only and were treated with excision. Conjunctival papilloma has a low risk of malignant transformation.⁹ No further investigation was done. There was no recurrence after excision 1 year so far.

Management of conjunctival papilloma can be difficult and it may be complicated with multiple recurrences. The recurrence rate in conjunctival papilloma is 3% to 27%.^{3,10,11} No-touch surgical excision and adjunctive double freeze-thaw cryotherapy are the preferred methods of treatment.²

Table 1 summarizes the management of squamous conjunctival papilloma reported to date. There was only 1 case with quarter of cornea involvement which was treated with cryotherapy. Most of the cases had no cornea involvement. Only 2 cases used AMT in the treatment of conjunctival papilloma. Kaliki S et al³ suggested oral cimetidine (300-400 mg 3 times a day) and/or topical interferon alfa-2b (1 MU 3 times a day) for 3 months after excisional biopsy to prevent recurrence in multiple and/or large tumours. In this case, the tumour was large with involvement more than half of the cornea, thus, applying AMT would be the better option.

Table 1. Summary of published article regarding primary treatment of squamous conjunctival papilloma

Reference	Method	Location	Cornea involvement	Primary treatment	Follow up
Omohundro JM, Elliott JH ¹² , 1970	Case report	Bulbar conjunctiva	¼ cornea	Cryo	No recurrence in 7months
Barry A Schechter et al ¹³ , 2002	Case report	Tarsal conjunctiva	No	Topical IFN (1 million unit/ml)	No recurrence in 18 months
Laura A. Falco et al ¹⁴ , 2007	Case report	Limbus and bulbar conjunctiva	No	Topical IFN (1 million unit/ml)	Not reported
Kalantzis G et al ⁷ , 2010	Case report	Fornix	No	Exc	No recurrence in 12 months
Rimvydas S. Asoklis et al ¹⁵ , 2011	Retro-spective study	Limbus, Bulbar conjunctiv, Fornix,	No	Exc, Cryo and AMT (2 tumours)	no recurrence in 3 years.

		Palpabral conjunctiva			
Kaliki S et al ³ , 2013	Retro-spective study	Limbus, Bulbar conjunctive Fornix, Tarsal conjunctiva Eyelid margin, Punctum, Plica semilunaris Caruncle	No	Cyro (3 tumours)	No recurrence in 36 months
				Exc and Cryo (61 tumours)	60 cases no recurrence in 36 months
				Topical IFN (1 tumour)	No recurrence in 36 months
				PDT (1 tumour)	No recurrence in 36 months
				Oral cimetidine (6 tumours)	No recurrence in 36 months
				Exc, Cryo, and topical or inj IFN (18 tumours)	17 cases no recurrence in 36 months
				Exc, Cryo, and oral cimetidine (9 tumours)	8 cases no recurrence in 36 months
Dawodu OA and Okeigbemen V ¹⁶ , 2016	Case report	Palpabral conjunctiva	No	Exc, introp MMC 0.3mg/ml and oral cimetidine	No recurrence for 10 months

Cryotherapy (Cryo), Excision biospsy (Exc) Interferon α b (IFN), Photodynamic therapy (PDT), Mitomycin C (MMC), Injection (Inj) , intraoperative (intraop).

Conclusion

No clinical trial was done to provide the best treatment option. Incisional biopsy is necessary to rule out malignancy and large excision may require amniotic membrane graft. Clinician should be aware of the risk of recurrence in management of conjunctival papilloma. Regular follow up is important.

Conflict of interest statement

We declare that we have no conflict of interest.

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