



CASE OF CONJUNCTIVAL NEVUS IN A 9 YR OLD GIRL

Ophthalmology

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KEYWORDS

INTRODUCTION

Nevi are congenital benign melanocytic tumors. It is the most common melanocytic conjunctival tumor. They can be further classified into junctional, subepithelial, compound, and blue nevus as well as congenital melanocytosis. The overall risk of malignant transformation is less than 1%.

The lesion is initially noticed in the first or second decade appearing as a solitary, slightly or moderately elevated pigmented (brown / tan) or partially pigmented lesion of variable size, most frequently juxtalimbal which is mobile over the underlying sclera. Signs of potential malignancy include prominent feeder vessels, sudden growth or increase in pigmentation or an unusual site such as palpaebal or forniceal conjunctiva. Clear cystic spaces are pathognomonic of the condition and are seen more easily in non-pigmented lesions. Diagnosis is usually made by slit lamp examination. Optical coherence tomography (OCT) can be used to detect the presence of intralesional cysts helping to confirm the diagnosis, exclude malignant differentials such as melanoma⁽¹⁾ and to visualise the extent and depth of the lesion.

Management of conjunctival naevi mainly involves excision biopsy and predominantly centers on the rare but significant risk of malignant transformation. Depending on the clinical impression, the surgical margins can be treated with cryotherapy. Naevi may be excised due to either patient or surgeon concern over malignancy, irritation or cosmesis.⁽²⁾

CASE DISCUSSION

A 9yr old female child was brought by her parents complaining of a brownish mass in her left eye since 4 years which was increasing in size since the past 2- 3 months. On examination the mass appeared flat, brown, present over the temporal palpaebal conjunctiva involving the limbus, approximately 7x10 mm in size. One tortuous vessel was seen entering the mass temporally. There was no regional lymphadenopathy and unaided vision was 20/20 in both. Intraocular pressure and dilated fundus evaluation was within normal limits. Anterior segment OCT revealed a conjunctival lesion with demarcation plane separate from underlying tissue.

Excision biopsy was performed under short sedation with local anesthesia. The mass was excised including a 4 mm margin and absolute alcohol was applied to corneal epithelium within 2mm area adjacent to the pigmented area, followed by cryotherapy to the margins and base of the lesion. Amniotic membrane grafting was done. Histopathological examination of the tissue revealed nevus cells with proliferative activity at the junction of conjunctival epithelium with subepithelial tissue. There were chronic inflammatory cells in the epithelium and nevus cells extending into the subepithelial space. Variable cytoplasmic pigmentation was seen. Based on the histological features, diagnosis of compound melanocytic conjunctival nevus was made.

DISCUSSION

Differential diagnoses of conjunctival nevus include complexion associated melanois, primary acquired melanosis, pigmented Axenfeld loop, malignant melanoma, secondary pigmentation, extension of a pigmented intraocular tumor to subconjunctival region, conjunctival foreign body, conjunctival argyrosis.

Mori H, Takahashi K. presented a Case of a Giant Conjunctival Melanocytic Nevus in A 78-year-old where they performed local

excision and histopathological examination. The result of hematoxylin-eosin staining disclosed multiple intralesional mucosal cysts and nevus cell nests with abundant melanin. Immunohistochemical examination revealed expression of S-100, melan-A, and HMB-45 and no expression of Ki-67. Histopathological examination showed no evidence of malignancy. Conclusion of the study was giant conjunctival melanocytic nevi can be diagnostically confused with conjunctival malignant melanoma.⁽³⁾

Similarly, Alkatan HM, Al-Arfaj KM, Maktabi A . performed a study titled Conjunctival nevi: Clinical and histopathologic features in a Saudi population. The aim of the study was to identify the distribution of the histopathologic types of conjunctival nevi among the Saudi population and to provide the basic knowledge needed for proper clinical diagnosis.⁽⁴⁾

Anterior segment OCT provides high-resolution imaging of conjunctival nevi with the ability to demonstrate all margins and to provide information on the presence of intralesional cysts, which are important in the diagnosis.⁽⁵⁾



Figure 1: Preoperative slit lamp picture



Figure 2: Postoperative Day 1 Picture Showing Amniotic Membrane Graft In Situ.

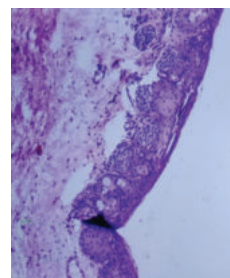


Figure 3: Histopathology photograph of the excised mass showing conjunctival epithelium with foci of solid and cystic inclusions of

conjunctival epithelium with chronic inflammatory cells. The junction of conjunctiva with subepithelium showing presence of the nevus cells.

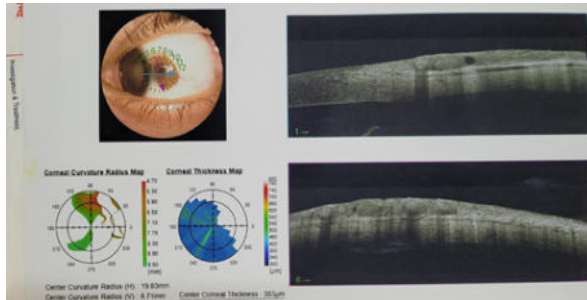


Figure 4: Anterior segment OCT photograph showing a conjunctival lesion with demarcation plane separate from underlying tissue

CONCLUSIONS

Melanocytic lesions of the conjunctiva range from benign conditions like complexion associated pigmentation, primary acquired melanosis (PAM) without atypia or conjunctival nevus to pre-malignant/malignant conditions like PAM with atypia, extension of an intraocular mass, conjunctival melanoma, pigmented squamous cell carcinomas. Therefore, these pigmented lesions especially when associated with sudden increase in size, prominent blood vessels need to be viewed with suspicion

Additional Information

Disclosures

Human subject: Consent was obtained by all participants in this study. **Payment and services information:** All authors have declared that no financial support was received from any organization for the submitted work.

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