Photo Essay

Compound Nevus Simulating a Conjunctival Melanoma

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PRESENTATION

A 50-year-old woman presented with a brownish-black inferior limbal mass for many years with rapidly increasing in size and encroaching on the cornea of the right eye over the past year. The clinical examination revealed a dark brown, elevated and irregular mass adhering to the underlying sclera and cornea with four feeder vessels [Figure 1a]. The mass had a maximum basal diameter of 8.0 mm and thickness of approximately 0.6 mm. Ultrasound biomicroscopy revealed no involvement of the angles [Figure 2a]. The patient was scheduled for an excisional biopsy. Intraoperatively, alcohol-assisted corneal epitheliectomy and excision using the "no-touch technique" with lamellar sclerectomy were performed. The margins of the conjunctiva were treated with double freeze–thaw cryotherapy, and amniotic membrane was transplanted [Figures 1b-d].

On histopathological analysis performed in our patient [Figures 2b and 3], the section examined under hematoxylin and eosin staining showed stratified squamous lining epithelium, which had a lesion with nests and sheets of nevus cells containing melanin. The cells were of three types: upper layer with abundant cytoplasm, lymphoid-like and melanin containing middle layer, and spindle shaped lower layer. The nevus cells appeared to drop off from the epithelium into the subepithelium. No evidence of atypia or mitotic figures was seen, and resection limits were free of the tumor.

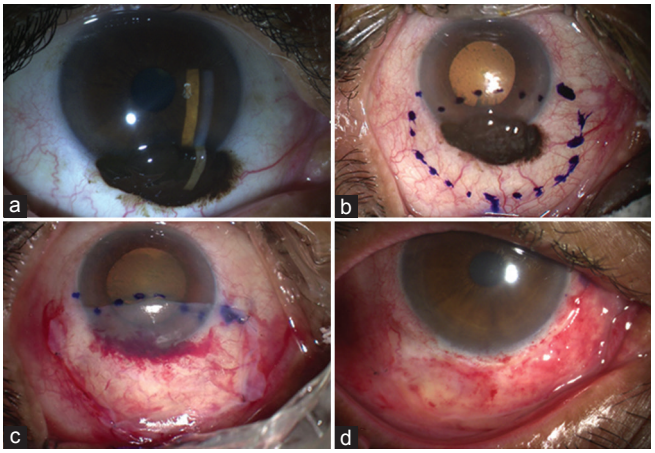

Figure 1. (a) Slit lamp photograph showing a blackish-brown elevated limbal mass. (b) Intraoperative photograph demonstrating the technique of excision of the suspicious lesion incorporating a margin of 2 mm and 4 mm on the corneal and conjunctival sides, respectively. (c) Amniotic membrane *in situ* after excision biopsy. (d) Clinical photograph acquired on postoperative day 1, showing the amniotic membrane and bandage contact lens *in situ*.

DISCUSSION

Conjunctival nevus is a benign tumor most often located at the nasal or temporal limbus and rarely in the fornix, tarsus, or cornea.[1] We report an unusual case of a conjunctival compound nevus simulating a conjunctival melanoma.

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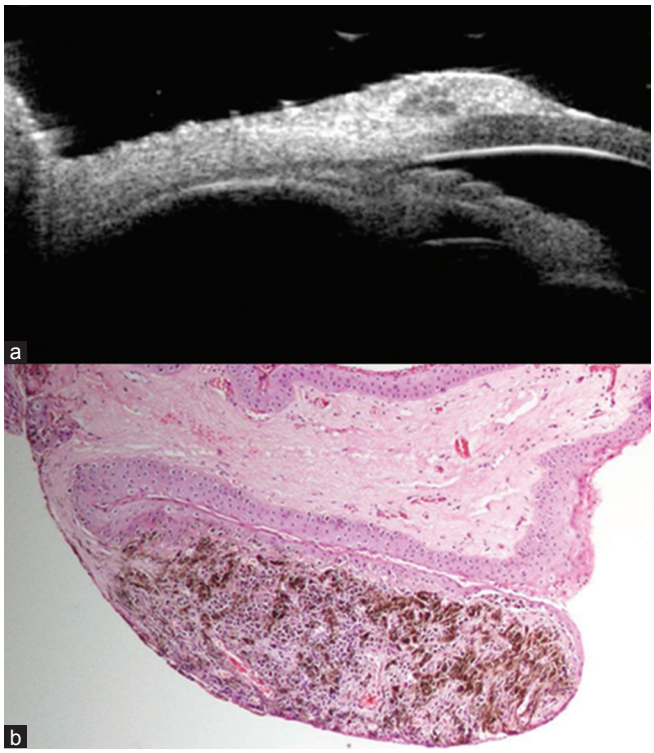

Figure 2. (a) Ultrasound biomicroscopic evaluation showing no involvement of the angles or ciliary body. (b) Hematoxylin-and-eosin-stained slide (4 × magnification) demonstrating sheets of nevus cells containing melanin in the epithelium and subepithelium, suggestive of a compound nevus.

The most common reasons for performing excisional biopsy included our concern regarding malignant changes based on the clinical features, recent growth, color change, and recurrence of a previously excised lesion. Other reasons for excision included the patient's motivation (concern of cancer, cosmetic appearance, and ocular irritation). The patient's clinical features suggesting melanoma, included her older age at identification of the nevus, corneal and scleral involvement, presence of prominent feeder vessels, and intrinsic vascularity and lack of prominent intralesional cysts.

Conjunctival nevi generally stop abruptly at the limbus and do not involve the corneal epithelium or stroma. A large conjunctival nevus overhanging the cornea may develop, but invasion of the cornea by a nevus is very unusual (<1%). In contrast, conjunctival melanomas often grow beyond the limbus and into the cornea.[2,3] Hence, any pigmented lesion at the limbus that straddles onto the peripheral cornea or a growing conjunctival lesion should be clinically considered a malignant melanoma.[2,4] Moreover, conjunctival melanomas rarely, if ever, display intralesional cysts. Feeder vessels are prominent in conjunctival melanoma.[3,5] Thus, identifying tumor cysts is a key point in differentiating conjunctival nevus from malignant melanoma, because many of their other features overlap.

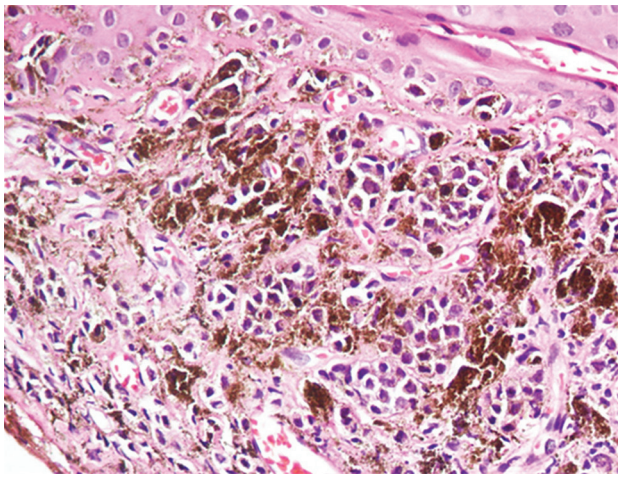

Figure 3. Magnified (40×) hematoxylin-and-eosin-stained slide showing nests of nevus cells without any features of atypia or mitotic figures.

To conclude, a simple biopsy can determine whether a pigmented conjunctival tumor is a nevus or a conjunctival melanoma. Hence, all suspicious lesions should be subjected to a histopathological examination.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understand that her name and initial will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of Interest

There are no conflicts of interest.

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