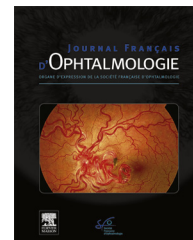




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LETTER TO THE EDITOR

Melanocytic nevus of the corneal endothelium in an Asian patient: A case report



Nævus mélanocytaire de l'endothélium cornéen chez un patient asiatique : à propos d'un cas

Introduction

Although melanocytic nevi can appear on any region of the body, they seldom affect the cornea. It is generally believed that corneal pigmented lesions frequently occur as a result of bulbar conjunctiva and sclerocorneal limbus lesions spreading, or arising from melanocytic cells that have migrated following corneal injury. When a pigmented conjunctival lesion extends into the cornea, racial melanosis, primary acquired melanosis, or malignant melanoma are more likely.

We present a unique case of a benign melanocytic nevus confined to the corneal endothelium without conjunctival involvement.

Case report

A Chinese 66-year-old man (Han ethnic group) presented to the ophthalmology clinic with one-year history of a dark brown spot on his left eye. He had neither symptoms nor history of previous ophthalmic disorders or injury in his left eye. He had a history of hypertension for eight years.

Distance corrected visual acuity was 30/50 in both eyes. Intraocular pressure was 13.7 mmHg in the right eye and 15.3 mmHg in the left eye. Slit-lamp examination showed an 8.54×5.23 mm abnormal brown tissue on the temporal side of the left cornea. It was located immediately beneath

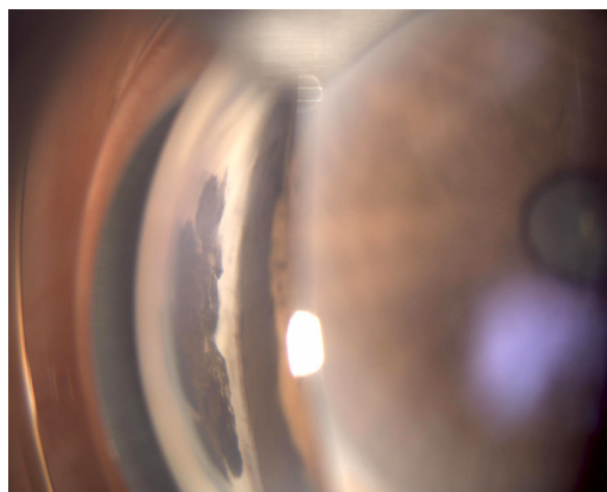


Figure 2. The lesion spared the iridocorneal angle.

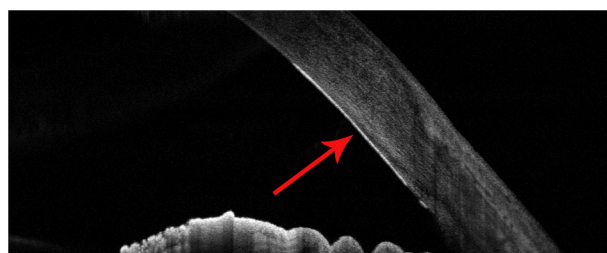


Figure 3. A layer of high signal tissue limited on the posterior surface of temporal cornea (red arrowheads).

the peripheral corneal endothelium. The conjunctiva and the rest of the cornea were not affected (Fig. 1). No other ocular lesion was observed on either slit-lamp examination or fundus examination.

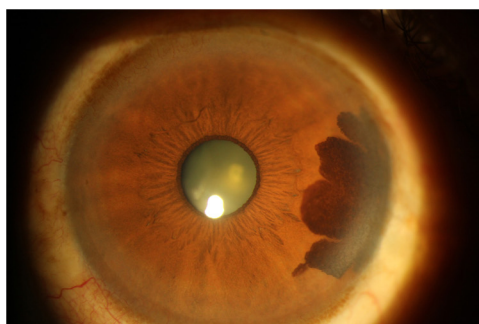
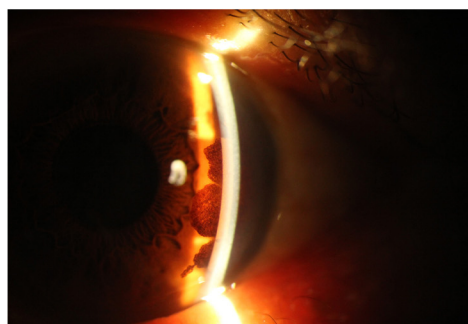


Figure 1. Clinical appearance of the pigmented corneal lesion.



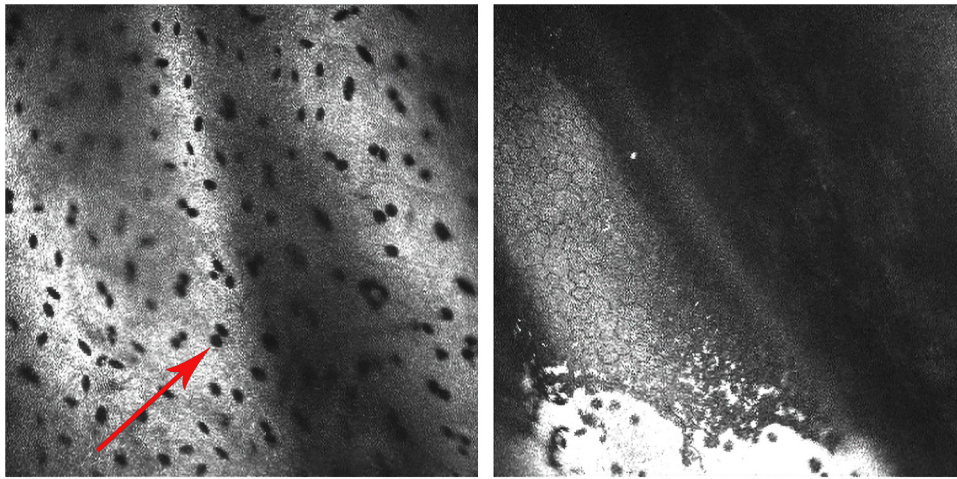


Figure 4. A large number of hyporeflective formations resembling cell nuclei (red arrowheads).

Gonioscopic examination revealed an open anterior chamber angle, with no obvious iris pigment in it (Fig. 2). Anterior segment optical coherence tomography (AS-OCT) showed a 12 μm layer of high signal tissue, which was limited on the posterior surface of the temporal corneal endothelium. No contact of the brown tissue with the structures of the iridocorneal angle was detected. The iris was normal (Fig. 3). Corneal confocal microscopy (CCM) identified a region of dense hyperreflective tissue behind the temporal corneal endothelium, with a clear boundary next to the normal corneal endothelium. Additionally, a large number of hyporeflective spots representing cell nuclei were discovered within the hyperreflective tissue (Fig. 4). The endothelial cell count was in the normal range of approximately 2,500 cells/ mm^2 .

A benign melanocytic nevus located on the corneal endothelium was suspected. Considering that the corneal endothelium lesion had not grown for one year or affected patient's daily life, we recommended close observation and regular follow-up visits.

Discussion

Melanocytic nevus of the cornea is extremely rare and corneal pigmented lesions does not necessarily imply a malignant melanoma. The majority of pigmented nevi involving the cornea are derived from conjunctiva, sclerocorneal limbus lesions, or arising from melanocytic cells that have migrated following corneal injury [1]. Conjunctival and corneal lesions of melanocytic origin can be classified according to their behavior biological in benign (nevus and melanocytosis), precancerous (primary acquired melanosis), and malignant (melanosis and racial melanoma) [2]. Malignant melanoma usually demonstrates unusual features such as asymmetry, confluence of growth, poor circumscription, pagetoid spread, marked cellularity, and cytologic atypia [3,4]. It is important to distinguish benign melanocytic nevi from malignant melanoma to avoid overtreatment or unnecessary surgical intervention [5]. When a pigmented lesion appears in the cornea, racial melanosis, primary acquired melanosis, or malignant melanoma are more likely. However, Shields et al. [6] have reported a benign nevus confined to the cornea and give the view that the involvement of the

cornea by a melanocytic lesion does not necessarily imply a malignant melanoma. That patient had the lesion under the corneal epithelium.

CCM can visualize corneal structure at the cellular level with real time, noninvasive, high-resolution, which plays a crucial role in the diagnosis of corneal disease [7–9]. CCM showed melanocytes and a clear boundary next to the normal corneal endothelium of our patient. The gonioscopy and AS-OCT showed that the pigment cell was not derived from iris. All examinations are highly similar to the case that Szaflik et al. [10] have reported in 2009: a lesion confined to the corneal endothelium, with a pigmented nevus imagine on the CCM.

Although a fine needle aspiration biopsy is needed to perform histopathology, typing and distinguishing benign lesions (nevus) from pre-malignant or malignant lesions (primary acquired melanosis or conjunctival melanoma), the diagnosis of a benign melanocytic nevus was highly suspected, so given the corneal endothelium neoplasm had not grown for one year, and it had not affected patient's daily life, we recommend close observation and regular follow-up visits for this patient.

Conclusion

We present, to the best of our knowledge, the first report of a benign melanocytic nevus located on the corneal endothelium without conjunctival involvement in an Asian patient.

Acknowledgments

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Disclosure of interest

The authors declare that they have no competing interest.

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W. Luo^a, M. Zhang^b, J. Zhang^c, Y. Wang^a,
J. Ortega-Usobiaga^d, S. Hu^{a,*}

^a *AIER Eye Hospital of Wuhan University (Wuhan AIER Eye Hospital), Wuhan, Hubei, People's Republic of China*

^b *Maternal and Child Health Hospital of Xiaogan, Xiaogan, Hubei, People's Republic of China*

^c *Department of Ophthalmology, Renmin Hospital of Wuhan University, Wuhan, Hubei, People's Republic of China*

^d *Department of Cataract and Refractive Surgery, Clinica Baviera, AIER Eye Hospital, Bilbao, Spain*

* Corresponding author.

E-mail address: zlpaaa@163.com

(S. Hu)

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