Case Report

Iris Cavernous Hemangioma: A Case Report

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Abstract

Purpose: Cavernous hemangioma of the iris is rarely seen, which can be presented with spontaneous hyphema.

Methods: In this report, we described a case of an iris cavernous hemangioma treated surgically, and the histopathological findings were also presented.

Results: Slitlamp biomicroscopy showed a lobulated, reddish-blue temporal iris mass. Anterior segment OCT presented a circumscribed mass of iris stroma at the papillary margin. Histopathologic examination revealed a benign tumor composed of large blood-filled vessels.

Conclusion: The present case highlights the features of iris cavernous henagioma and demonstrates the histopathological findings. (***Eye Science 2011; 26: 183-COV3***)

Keywords: iris; cavernous hemangioma

Iris cavernous hemangioma has been seldom reported yet, which can be complicated by spontaneous hyphema[1]. In current report, we described a case of iris cavernous hemangioma treated surgically, and illustrated the postoperative histopathological findings, providing more evidence for understanding iris cavernous hemangioma in clinical setting.

Case report

A 21-year-old male was admitted to our hospital for decreased visual acuity in the right eye. He reported no remarkable medical, familial or ocular histories. Ocular examination showed best-corrected visual acuities were 20/40 OD and 20/20 OS. Intraocular pressure was 13 mm Hg OD and 11 mm Hg OS. Slit lamp biomicroscopy showed a lobulated, reddish-blue temporal iris mass, measuring 3 mm in diameter, on the iris outer surface of the right eye. The mass did not invade into the anterior chamber angle. A dependent layer of blood was seen within the cystic mass (Figure 1). Anterior segment OCT observed a circumscribed mass of the iris stroma at the papillary margin (Figure 2). B-scan ultrasonogram showed normal vitreous and retinal structures. Based upon the combined findings above, the patient was diagnosed with iris cavernous hemangioma.

The reddish mass, measuring 3×1×2 mm in size, was removed surgically. Histopathological examination revealed a benign tumor consisted of large blood-filled vessels, which were arranged in a diffuse and haphazard pattern and complicated with a cavernous hemangioma (Figure 3). The vessels were lined by thin layers of endothelial cells. Iris pigment was randomly distributed outside the vessels (Figure 4).

Discussion

Iris cavernous hemangioma is characterized as two types of clinical manifestations. Firstly, small and nontumorous vascular tufts generally occur near the pillary margin, which appears as grape-like clusters with multiple cystic components and is difficult to observe. The lesions may be presented due to recurrent hyphema causing decreased visual acuty. Another type appears as a clearly visible mass in the iris stroma[2]. Some lesions may be found occasionally during routine examination. The iris cavernous hemangioma may regress spontaneously, the cornea may become opaque in contact with the iris mass, and the pupil may become distorted. Several cavernous hemangiomas affect the retina, choroid and ciliary process[3]. However, iris tumors have been

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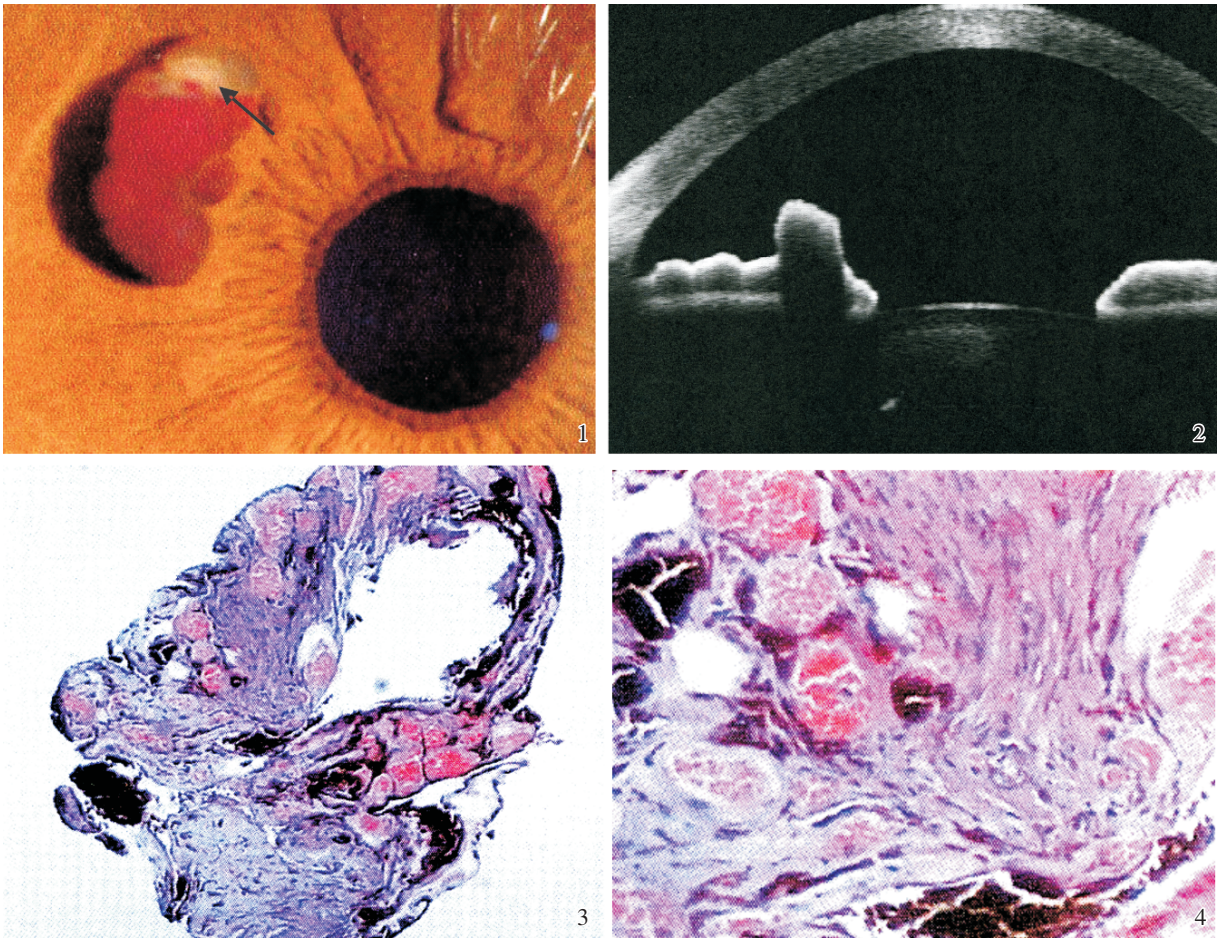

Figure 1 Anterior segment photograph show iris cavernous hemangioma (red circumscribed mass in the iris stroma).

Figure 2 Anterior segment OCT photograph indicates a dome-haped iris mass at the papillary margin.

Figure 3 Low-magnification photomicrograph reveals cavernous venous channels with intraluminal erythrocytes.(HE staining ×20)

Figure 4 High-magnification photomicrograph demonstrates large blood-filled vessels lined by thin endothelial cells and iris pigment was sporadically distributed outside the vascular channels.(HE staining ×200)

rarely reported in clinical practice. A previous study reported iris cavernous hemangioma associated with multiple CNS cavernous hemangiomas, cutaneous hemangiomas, and multiple hemangiomas in the kidney, brain and skin[4].

Iris cavernous hemangioma should be taken into account in the differential diagnosis of other iris tumors and pseudotumors, such as iris varix, iris capillary hemangioma, racemose hemangioma and iris melanoma. Iris varix is a solitary, rounded and dark-brown lesion that invades through the anterior border layer of the iris as a smooth mass and was associated with hemorrhage[5]. It generally becomes more apparent after bleeding or thrombosis, producing hematoma-like lesions. Iris capillary hemangioma mainly originates from the iris root. Tortuous iris vessels with a large diameter extends toward the peripupillary area[6]. Iris capillary hemangioma is a red diffuse or circumscribed mass, which mainly attacks children with congenital cutaneous capillary hemangioma and tends to regress in early childhood[7]. Although racemose hemangioma does not belong to a neoplasm, it represents an arteriovenous communication, resembling the racemose hemangioma observed in the retina. In addition, it appeares relatively subtle, partially obscured by the adjacent iris stroma[8]. Iris melanoma is typically a solid mass that may have prominent vascularity, but the classic AV mal-

formation has not been seen. The sentinel vessels are generally larger and more palpable in melanoma[9].

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