Short communication

Iris microhaemangiomas: Presentation of a case

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Case report: A 74-year-old woman presented with blurry vision of 12-h duration in her right eye, and with no other symptoms. Biomicroscopic examination revealed a 3-mm hyphaema in her right eye and multiple nodular structures in the pupillary margin of both eyes.

Discussion: Iris tufts are vascular anomalies unrelated to ischemia that must be included in the differential diagnosis of spontaneous hyphaema.

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Microhemangiomas iridianos: a propósito de un caso

RESUMEN

Caso clínico: Mujer de 74 años que acude por cuadro de visión borrosa en el ojo derecho, de 12 h de evolución, no acompañada de otra sintomatología. En la exploración biomicroscópica se observa un hipema de 3 mm en el ojo derecho y múltiples estructuras nodulares vasculares en el margen iridiano de ambos ojos.

Discusión: Los microhemangiomas vasculares iridianos son anomalías vasculares no relacionadas con la isquemia que deben ser incluidas en el diagnóstico diferencial de hipema espontáneo.

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Introduction

Iris microhemangiomas (IM), also known as Cobb glomeruluss or tufts, are infrequent benign vascular tumors which occasionally bleed. For this reason, they must be included in differential diagnostics for spontaneous hyphema.

Clinical case

A female patient, aged 74 years, was referred by her optometrist for blury vision in the right eye with 12-h evolution with spontaneous onset without associated symptomatology. Her personal history includes diabetes mellitus type II with 10 years evolution treated with oral anti-diabetics, asthma and open angle primary glaucoma in both eyes (BE) beginning 3 years ago in treatment with latanoprost.

An ophthalmologic examination revealed visual acuity (VA) of 0.8 in RE and 1 in LE, and intraocular pressure (IOP) of 18 and 16 mmHg in RE and LE, respectively, with normal pupil reflexes.

An anterior segment biomicroscopic examination revealed several vascular nodular structures in the pupil edge of BE which were identified as IM on the basis of morphology (Figs. 1 and 2) and an active hemorrhage in the RE which proceeded from 11 o’clock of the pupil margin and 3 mm hyphema. Anterior segment optic coherence tomography (Zeiss Cirrus™ HD-OCT, Dublin, California, USA) evidenced nodular morphology of IM and hyper-reflectiveness due to its vascular nature with marked screen effect (Fig. 3).

 Gonioscopic examination evidenced a grade 2 Shaffer angle free of neovessels or other alterations. No signs of diabetic retinopathy or ischemia were observed in the ocular fundus.

Treatment with topical corticosteroids (Maxidex® eyedrops in 0.1% suspension), cyclopentolate (cyclopliceg Colircusi® in 1% solution) and brimonidine (Alphagan® eyedrops in 0.2% solution) was established. Latanoprost (Xalatan® eyedrops in 0.005% solution) was suspended. After 24 h active bleeding could not be observed and hyphema had resolved almost entirely. In subsequent visits the treatment was progressively reduced and withdrawn entirely after 3 weeks as the patient referred normal vision (VA = 0.9).

Discussion

In 1958, Fechner first described IM in an isolated case. Subsequently, in 1969 and 1970, Cobb et al. published two series of 44 and 10 cases, and since then several isolated cases have been published. IM are more frequent in males and in individuals aged over 50 years. It is believed that they affect 1/2000 patients examined in practice.

Histopathologically, IM are described as vascular hamartomas of the iris stroma, characterized by thin and small blood vessels measuring 15–25 μm in diameter which develop in isolation or are grouped in clusters of approximately 150 μm.
throughout the iris edge.\textsuperscript{3-3} IM frequently present bilaterally and in some cases exhibit pigment alterations in the iris edge in the vicinity of the lesions. These are believed to be acquired lesions because they have never been observed in children and the majority appear in the sixth and seventh decades of life.\textsuperscript{3}

IM have been described in association with multiple pathologies such as cutaneous and oribitary hemangiomas, the Sturge–Weber syndrome, a range of respiratory, vascular and cardiac diseases, diabetes mellitus—as in this case—and myotonic dystrophy. The latter 2 associations are abundantly described in the literature.\textsuperscript{2,3}

The clinical importance of these lesions lies in the possibility of spontaneous bleeding involving hyphema and IOP increases. However, this rarely occurs and when it does, it is generally an isolated episode.\textsuperscript{3} Even so, with blurred vision associated to spontaneous hyphema this condition should be considered despite the absence of pain or ocular hypertension as in the case described herein.

In most cases, the biomicroscopic morphological characteristics and the ocular and systemic clinic context of the patients facilitate differentiating IM from other vascular formations in this location such as budding rubeosis. In this case we discarded this diagnostic not only due to the absence of any sign of ischemia in the retina and neovascularization in the gonioscopic examination, but also due to the typical nodular arrangement of these lesions in the pupil edge which is quite different from the pseudo-fibrillary neovascular growth on the anterior surface of the pupil sphincter which is characteristic of iris rubeosis.\textsuperscript{3} In addition, the nonprogressive nature of iris microhemangiomatosis also differentiates this pathology from iris rubeosis, which generally has a severe effect on vision if not treated at an early stage.

In general it is not necessary to treat IM.\textsuperscript{3} In the event of spontaneous bleeding with hyphema and increased IOP, the episode should be treated conservatively as in the described case. The authors are unable to describe the role that new treatments with monoclonal antibodies against vascular endothelial growth factor (VEGF) could play in this pathology.

When hyphema is recurrent, argon laser treatment of the lesions has been described for promoting resolution and diminishing spontaneous bleeding risk or in intraocular surgical procedures.\textsuperscript{4,5} Several authors have supported the use of fluorescein angiography in these cases for identifying injuries that are not visible in biomicroscopic studies but which could be significant for avoiding additional bleeding.\textsuperscript{3,5}

Observed hyper-fluorescence which in early times easily identifies the location of the lesions would also enable in late times a differential diagnostic with iris rubeosis due to the fact that the diffusion of contrast that occurs in neovascularization cannot be detected in microhemangiomas. As the case described herein was the first episode that resolved within 24 h by means of conservative treatment, additional actions were not deemed necessary apart from a sequential follow-up of the patient.

To conclude, iris microhemangiomas are vascular anomalies unrelated to ischemia. Their clinical importance lies in the possibility of bleeding with IOP increases, and for this reason IM should be considered in the differential diagnostics of spontaneous hyphema.

\section*{Conflict of interests}

No conflict of interests has been declared by the authors.

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