Short communication

Vitreous hemorrhage secondary to iridociliary cyst


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Article history:
Received 31 July 2013
Accepted 4 September 2014
Available online 12 November 2015

Keywords:
Cyst
Iridociliary
Ultrasound biomicroscopy
Angle-closure
Vitreous hemorrhage

ABSTRACT

Case report: An 18-year-old man, presented a lower vitreous hemorrhage of unknown cause. Multiple tests are performed, including Ophthalmic Ultrasound and Fluorescein Angiography (FA), they did not find justification of bleeding. Finally, we decide to do a Biomicroscopy Ultrasonic (UBM) showing an iridociliary cyst.

Discussion: The iridociliary cysts are single or multiple, primary or secondary. The primaries are usually benign so, they do not require treatment. When the cyst has a considerable size, it may produce a focal plateau iris with or without angle-closure. Our case reveals an unusual complication that should take notice of when you have an unknown vitreous hemorrhage.

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Hemovítreo secundario a quiste iridociliar

RESUMEN

Caso clínico: Varón de 18 años, presentó un hemovítreo inferior de causa desconocida. Se realizan múltiples pruebas, entre ellas ecografía oftálmica y angiofluoresceíngrafía (AFG), no encontrándose justificación al sangrado. Finalmente se decide realizar una biomicroscopia ultrasonica (BMU) donde se aprecia un quiste iridociliar.

Discusión: Los quistes iridociliares son únicos o múltiples, primarios o secundarios. Los primarios suelen tener carácter benigno, por lo que no requieren tratamiento. Cuando el quiste alcanza un tamaño importante puede producir un iris meseta focal con o sin cierre angular. Nuestro caso describe una complicación inusual que habría que tener en cuenta ante un hemovítreo de origen desconocido.

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** The work was presented at Barcelona SECOIR, May 2013.
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**Introduction**

Iris cysts are infrequent injuries whose importance lies in the differential diagnosis with malignant tumours.\(^1\) Shields et al classified them into primary and secondary. Primary cysts are classified into pigment and stromal epithelial cysts; secondary cysts are classified into epithelial, either intra-ocular tumour or parasites.\(^2\)

Within the primary or neuroepithelial cysts are the peripheral ones (iridociliary), which are formed spontaneously at the junction of the iris with ciliary body, and are the most common. They can be round or oval, frequently single. They are often diagnosed by chance in young people. Among their complications is the focal plateau iris that could lead to angular occlusion, although this is uncommon and is usually associated with large cysts and dislocations. Dislocations are movements or landslides into anterior chamber or into the vitreous. They do not usually require treatment since they are benign.\(^2\)\(^-\)\(^5\)

In contrast, secondary cysts cause further complications: corneal oedema, uveitis, glaucoma and decreased visual acuity.\(^3\)

Ultrasound biomicroscopy (UBM) has enabled a breakthrough in the anatomical visualisation of the cyst and in its differential diagnosis. It has a penetration of about 4 mm inside the eyeball, with an approximate lateral and axial resolution of 50 µm with the 50MHz transducer. It far surpasses conventional ultrasound with 10MHz transducer and a resolution of 300–400 µm.\(^6\)\(^,\)\(^7\)

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**Fig. 1** – Ocular ultrasound of the LE. No significant injuries, no evidence of optic nerve drusen.

**Fig. 2** – Fluorescence angiography of the LE. Compatible with normal, without the presence of new vessels or vascular disorders.
Clinical case

Man of 18 years, referred from another hospital for left eye (LE) vitreous haemorrhage of 20 days of development. No relevant personal and ophthalmological history, diseases, trauma, surgeries or systemic or topical treatments.

The examination showed a better corrected visual acuity in the right eye (RE) with −5.0 to 21/20 of the unit and in the LE with −6.25 to 11/20 of the unit. The intraocular pressure was of 13 mmHg in both eyes (BE). Biomicroscopy was normal, no protruding iris mass or asymmetry between the anterior chamber of BE. Gonioscopy showed an open angle with no changes along the different quadrants. No retro-iridian masses were observed. The fundoscopy revealed a pupilla with a slightly raised nasal edge, symmetric in BE, normal macula and vasculature. No rheumatogenous peripheral retina in BE and a lower vitreous haemorrhage in re-absorption in the LE.

Ocular ultrasound (Fig. 1) was performed to rule out optic disc drusen as justification for raising the papillary nasal edge; and fluorescence angiography (FA) (Fig. 2) to exclude new vessels or vascular abnormalities to explain the bleeding, both being normal. It was decided to perform an UBM (Ultrasonic Biometer Microscopic)/Sonomed Ultrasound B (Figs. 3 and 4); a round cyst of 0.86 mm × 0.57 mm in the LE was observed, of thin-walled, high reflectivity and anechoic content compatible with an iridociliary cyst, not producing distortion in the angle.

Discussion

It is assumed that the UBM offers great help for the differential diagnosis of iris lesions. It is necessary to make a differential diagnosis with iris nevus, solid injury with homogeneous internal reflectivity, which does not produce distortion of the structure where it settles, with or without slow growth; unlike melanoma which is a solid structure of medium and uniform...
reflectivity, cavitated in 9.5% of ciliary body melanoma cases, which distorts the surrounding structures by rapid growth. Also, it is necessary to perform it for medulloepithelioma that presents medium to high reflectivity, and multiple cavitated areas.1,6,8

Cysts are formed by separating two layers of the epithelium in a zone between the pupil and ciliary body. The pathogenesis is not entirely clear; Vail and Merz speculated that it could be due to a pull of the zonules on the ciliary epithelium in the eye growth, which would allow faulty apposition of the inner and outer layers at the level of the iridociliary region.2

Isolated cysts usually require no treatment, except follow-up. In case of producing occlusion angle glaucoma, an iridotomy or laser cystectomy could solve the problem.4,9

A hypothesis considered to explain the vitreous haemorrhage would be a possible blood passage to the vitreous, produced by the friction of the cyst at iridociliary level, which may be combined with a zonular defect. We do not know if there was a hyphaema in the acute phase, as it resolved 20 days after the onset of illness. Therefore, before a vitreous haemorrhage of unknown origin, an adequate examination of the iridociliares structures would be appropriate to rule out injuries which would justify bleeding in the posterior chamber.

No other case that associates iridociliary cysts with vitreous haemorrhage has been found in the literature. The only reference article would be one published by Pushker et al under the name of “Medulloepithelioma of the ciliary body mass associated with intravitreal haemorrhage in adults”.10

Conflict of interest

The authors declare that there are no conflicts of interest.

REFERENCES