Short communication

Vitreous cyst: A case presentation

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ABSTRACT

Case report: We report a case of a 12-year-old patient who complained about visual disturbances in left eye for 6 months. His visual acuity was 1/0.9, funduscopy in left eye revealed a free-floating cyst in the anterior vitreous. Magnetic resonance showed a low intense image in T1, and B-scan ultrasound confirmed a hypoechogenic cyst of 3.2 mm × 4.3 mm; ultrasound biomicroscopy revealed a normal ciliary body.

Conclusion: Given the good VA the patient will be monitored periodically. If the cyst interferes with visual axis, management with Nd:YAG or argon laser photocystotomy or removing it by pars plana vitrectomy has been advocated.

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Quiste vítreo: a propósito de un caso

RESUMEN

Caso clínico: Presentamos el caso de un paciente de 12 años que refiere miosisopsias en ojo izquierdo (OI) de 6 meses de evolución. Presenta una agudeza visual de 1/0,9, en fondo de ojo izquierdo un quiste vitreo anterior. En la resonancia magnética, imagen hipointensa en T1 y en la ecografía modo B, lesión hipoecogénica de 3,2 × 4,3 mm; la biomicroscopia ultrasónica evidenció un cuerpo cilíar normal.

Conclusión: Dada la buena AV del paciente se observará periódicamente. Si interfiriase con el eje visual es posible fragmentarlo con láser Nd:YAG o Argón, o bien su extracción vía pars plana.

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Introduction

Congenital or acquired vitreous cysts are rare.\(^1\) They may vary in size, shape and make or may not be pigmented and can be either free in the vitreous cavity or adhered to the ocular structures. Acquired vitreous cysts have been described in individuals with traumatic or parasite history.\(^2,3\) In congenital cases no association has been described with ocular diseases. It is believed that pigmented congenital vitreous cysts originate in the pars ciliaris epithelium, whereas the nonpigmented ones originate in the hyaloid vascular system.\(^1,4,5\) Rarely congenital cysts interfere with vision and require treatment. Therefore it is clinically important to differentiate between both types of cysts.

Clinic case

Male, 12, without relevant personal history, referred due to myodesopsiae in the left eye (LE) with one year evolution.

The assessment produced a visual acuity of 1 in the right eye (RE) and in the LE of 0.9 which did not improve with stenopeic.

Anterior biomicroscopy showed a normal anterior pole. Intraocular pressure was of 14 mmHg in both eyes.

The RE ocular fundus was normal, while in the LE a translucent cyst was observed in the anterior part of the vitreous cavity, with the rest of the exploration, including pars plana, being normal (Figs. 1 and 2).

B-mode echography: hypoechoic lesion measuring 3.2 mm × 4.3 mm (Fig. 3).

The orbitary magnetic resonance image without contrast shows a hypo-intense lesion in T1 with coronal section in LE (Fig. 4).

Ultrasound biomicroscopy showed a normal ciliary body with an iridian concavity of 360°.

Serological test and adequate pediatric assessment allowed us to discard associated systemic diseases.
Discussion

Congenital vitreous cysts are rare findings and frequently asymptomatic. Visual acuity is usually normal in patients with these cysts, which only require regular observation. Their etiology continues to be idiopathic. The mean age of presentation varies between 5 and 68 years, but the majority of cases appear in patients between 10 and 20 years. The dimensions of the cysts vary between 0.15 and 12 mm, having spherical, oval or other shapes.

Differentiating between congenital and acquired vitreous cysts is important in order to establish an adequate therapeutical approach as the former rarely interfere with the visual axis and therefore to not require treatment.

It is believed that pigmented congenital vitreous cysts originate in the pigmented epithelium of the iris or the pars ciliaris of the ciliary body, while other authors believe they derive from an incomplete regression of the primary vitreous or the residual persistence of the hyaloid vascular system. However, said cysts have also been described in structurally normal eyes.

Acquired vitreous cysts have been found in patients affected by degenerative diseases such as pigmentous retinitis, choroidal atrophy, retinoschisis, uveitis, toxoplasmosis, parasitic vitritis and endophthalmitis due to nematodes. However, the etiopathogenicity of the development of cysts is not clear. Other authors have indicated that these could be ciliary adenomas which have become detached in the vitreous, neoformations in the anatomic structure of a coloboma or a vitreous reaction to chorioretinal degenerations.

In the majority of cases, parasitic cysts exhibit thicker white-cream-colored walls. The scolex can be evidenced by slit lamp or ultrasound biomicroscopy (UBM). In addition, lab tests are useful for preparing the differential diagnostic.

In our case, the neuroectodermic origin of the cyst was suspected due to the presence of pigment on its surface. However, UBM did not confirm this possibility. B-mode echography discarded the presence of vitreous embryonic remains. The parents of the child did not authorize angiography and it was not possible to assess the avascular nature of the cyst. Infectious etiology was excluded after a hemogram of the serological tests.

In the medical literature the growth of cysts has been observed in only 2 patients with a 17-year follow-up, indicating the benign nature of these processes.

There are very few data about the treatment of these formations. Awan successfully treated with argon laser a congenital cyst that caused disabling visual symptoms due to its location in the visual axis, collapsing and dispersing the pigment granules in the vitreous cavity, without neoformation. Complications may arise such as incomplete fragmentation, retinal iatrogenic burns or cataract formation after the application of laser. Orellana et al. aspirated a cyst via pars plana. Obviously, treatment is contraindicated in asymptomatic patients or those who do not refer severe symptoms. The option of pars plana vitrectomy would be for the cases in which disabling symptoms persist after laser photocystotomy.

To conclude, the absence of personal history, normal results of the systemic study together with the age of the patient lead us to think that the etiology could be congenital. Considering the good visual acuity of the patient, the condition must be observed regularly. A differential diagnosis of vitreous cysts is important in order to establish an adequate treatment of this disease.

Conflict of interests

No conflict of interests have been reported by the authors.

References