European Journal of Ophthalmology / Vol. 14 no. 2, 2004 / pp. 156-158

SHORT COMMUNICATION

Case report

Pigmented congenital vitreous cyst

Z. BAYRAKTAR, Z. KAPRAN, S. OZDOGAN

Beyoglu Eye Education and Research Hospital, Istanbul - Turkey

PURPOSE. *To describe the clinical findings in a case with a typical pigmented congenital vitreous cyst and to discuss its differential diagnosis.*
METHODS/CASE REPORT. *A 24-year-old woman complaining of floaters and blurring of vision during eye movements in the right eye was examined.*
RESULTS. *A diagnosis of congenital vitreous cyst was made after detailed vitreoretinal examination, B-scan ultrasonography (eye and abdomen), computerized tomography of brain, chest radiogram, serologic tests for* Echinococcosis *and* Cysticercosis *in the serum, and complete blood count for eosinophilia. Clinical presentation and the patient's complaints remained unchanged during 3 years of follow-up.*
CONCLUSIONS. *Congenital vitreous cysts are benign lesions. Differential diagnosis from acquired cysts requires careful clinical examination and appropriate laboratory tests. (Eur J Ophthalmol 2004; 14: 156-8)*

KEY WORDS. *Congenital vitreous cyst, Differential diagnosis*

Accepted: November 23, 2003

INTRODUCTION

Congenital or acquired cysts of the vitreous are rare (1). Acquired cysts have been reported to be usually traumatic or parasitic in origin (2, 3). Congenital vitreous cysts, on the other hand, do not have any casual relationship and/or association with previous or concomitant ocular pathology. Pigmented congenital cysts are believed to originate from the *pars ciliaris* epithelium; the nonpigmented variety, from the remnants of the hyaloidal vascular system (1, 4, 5). Acquired vitreous cysts are usually associated with some reduction of visual acuity and indicators of underlying vitreoretinal disease. As congenital cysts are stable and harmless, rarely interfere with visual acuity, and usually do not require treatment; differentiation between a congenital and an acquired cyst is clinically important. In this brief report we describe a case with a typical pigmented congenital vitreous cyst and focus on differential diagnosis.

Case report

A 24-year-old woman complaining of floaters and blurring of visual acuity during eye movements in her right eye was referred to our clinic. Best-corrected visual acuity was 20/20 in both eyes with a minimal astigmatic correction. Slit-lamp examination revealed normal anterior segments in both eyes. Intraocular pressures were 14 and 15 mmHg in right and left eyes, respectively. Following the pupillary dilatation, a pigmented, thin-walled, translucent cyst just behind the

1120-6721/156-03$15.00/0

crystalline lens was noted in the right eye during slit-lamp examination. The cyst was noted to be mobile in the vitreous cavity and moving freely up, down, left, and right along with the eye movements (Fig. 1, a-c). Binocular indirect ophthalmoscopic examination revealed a normal retina (Fig. 2). Vitreous and retinal examination of the fellow eye was also normal. B-mode ultrasound was performed in order to measure the cyst dimensions and identify the cyst content. A thin-walled, mobile, spherical, hypoechoic cyst was detected (Fig. 3). The diameter of the cyst was measured at 3.93 mm. No scolex was identified inside the cyst. Indirect hemagglutinin tests of *Echinococcosis* and *Cysticercosis* were negative in the serum. Eosinophilia was not present and total immunoglobulin G levels were normal in blood. Ultrasound examinations of liver, spleen, and kidneys were normal. Chest radiogram and brain computerized tomography were also normal.

With those clinical and laboratory findings, a diagnosis of congenital pigmented vitreous cyst was made. The patient was informed about the diagnosis and periodic observation without any treatment was advised. During 3 years of follow-up, the patient's complaints and clinical findings were not changed.

DISCUSSION

Congenital vitreous cysts are rare and usually asymptomatic. Generally, they are not associated with a significant reduction in visual acuity (1, 4, 5). In our case, the main complaint was visual blurring associated with sudden eye movements and visual acuity was 20/20.

Differentiation of congenital vitreous cysts from the acquired variety is important and should be accomplished in order to establish an appropriate management strategy (1-3). Although congenital cysts are almost always translucent (even those surrounded by pigment epithelial cells), acquired cysts are generally opaque or only barely translucent (2, 3). Traumatic cysts can be translucent but usually have pigment in their walls and are not freely mobile. Previous medical history of any ocular trauma and/or surgery are important clues in the differential diagnosis of acquired traumatic vitreous cysts (2). Our patient's medical history was unremarkable in this regard.

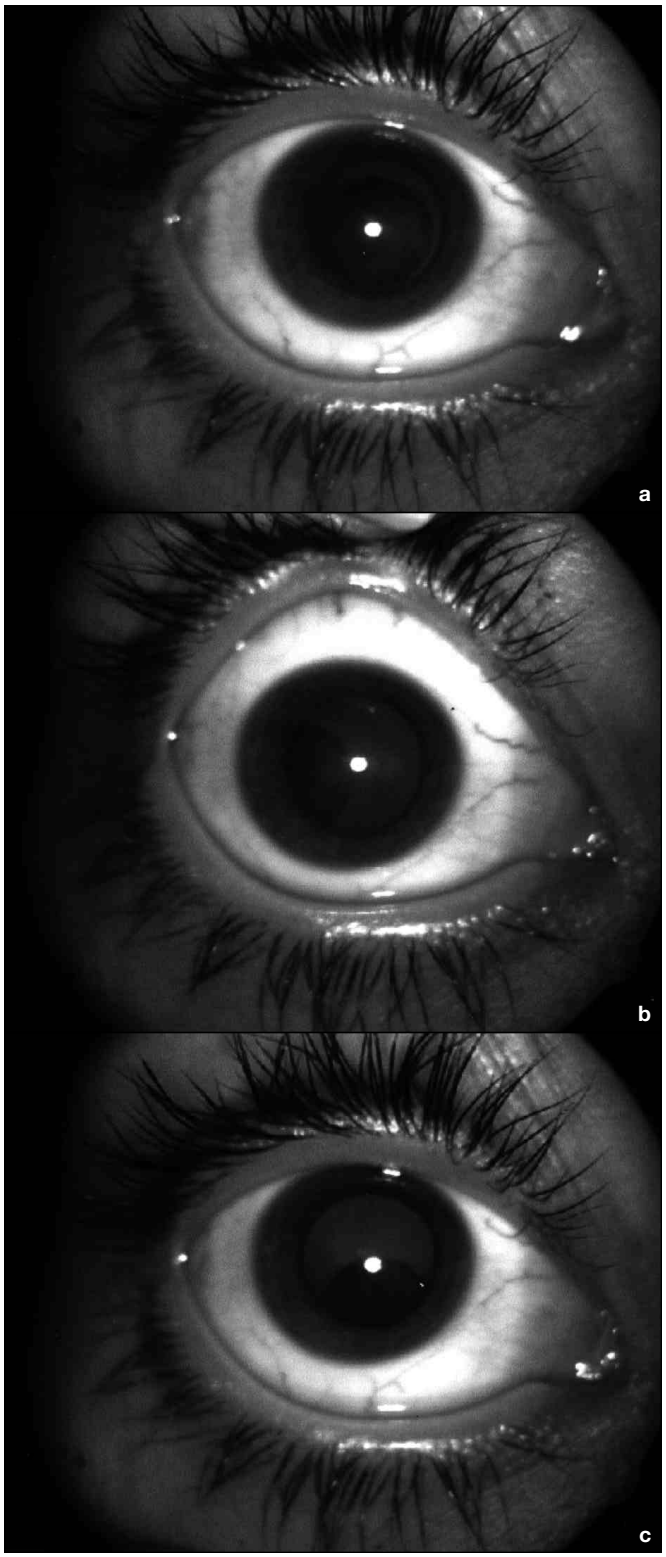

Fig. 1 - *Pigmented-walled translucent vitreous cyst behind the crystalline lens moving with eye movements. Straight* **a)**, *lateral* **b)**, *and downward gaze* **c)**.

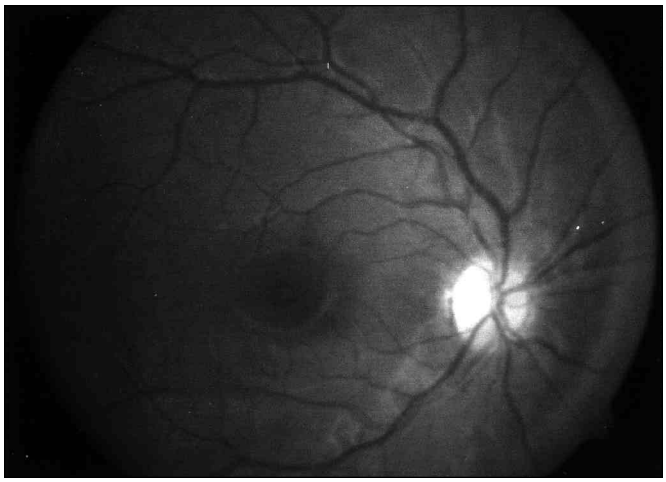

Fig. 2 - *Normal retinal appearance.*

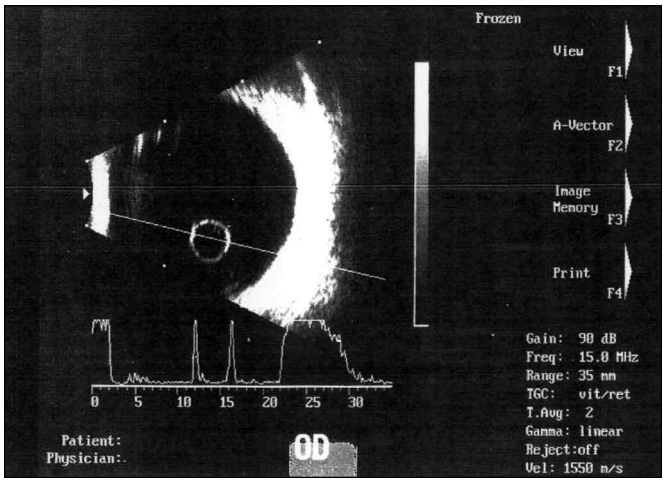

Fig. 3 - *Thin-walled, spherical, hypoechoic cyst on B-mode ultrasonography.*

Parasitic cysts have generally thicker walls and are cream or white. Scolex inside the cyst might be detected during slit-lamp and/or ultrasound examination in some instances (3). In our case, no scolex-like structure was identified by slit lamp or by ultrasound inside the cyst cavity. Laboratory tests could be useful in differential diagnosis of parasitic cysts in some patients (3). Immunologic tests of *Cysticercosis* and *Echinococcosis* were negative and eosinophilia was absent in our patient.

Pigmented congenital cysts are believed to originate from pars ciliaris (1, 5). Although we could not perform ultrasonic biomicroscopy, ora serrata and pars plana were found to be normal in the fundus examination performed with scleral depression. Also, no abnormality was detected in that region during conventional B-mode ultrasound.

In conclusion, differential diagnosis of vitreous cysts is important in order to aid proper management. In this brief report, we describe a case with a pigmented congenital vitreous cyst in which differentiation from other cystic lesions of the vitreous cavity was accomplished by careful clinical examination and appropriate laboratory tests.

Reprint requests to:
Zerrin Bayraktar, MD
Emintas Camhk Sitesi B blok D:6
Merdivenkoy 81080
Istanbul, Turkey
zerrinbayraktar@yahoo.com

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