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EC OPHTHALMOLOGY
Case Report

A Rare Presentation of Vitreous Cyst in an Adult Male

Anant Bhosale*, Sudeep Pujari, Rodney Morris, VR Saravanan and Narendran V

Department of Retina and Vitreous, Aravind Eye Hospital, Coimbatore, TN, India

***Corresponding Author:** Anant Bhosale, Consultant, Department of Retina and Vitreous, Aravind Eye Hospital, Coimbatore, TN, India.

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Abstract

Purpose: To report a rare solitary unilateral vitreous cyst

Methods: A complete clinical examination, fundus photography, ultrasound B-scan, and fundus fluorescence angiography was performed.

Results: Patient came to hospital for routine examination. After examination and investigation diagnosis of vitreous cyst was made.

Conclusion: Vitreous cyst is a rare clinical finding. It can occur in normal as well as eyes with certain ocular pathologies. Thorough clinical examination is necessary to diagnose and differentiate it from other pathological conditions.

Keywords: *Vitreous Cyst; Congenital Cysts*

Introduction

Intravitreal cysts are divided into congenital and acquired cysts. Congenital cysts are associated with residues of hyaloid vascular system and are occasionally present in normal eyes noticed incidentally on routine ocular examination [1]. Acquired cysts are more often associated with some type of trauma, inflammation due to intraocular infection, such as parasitic vitritis and intermediate uveitis [2], toxo-plasmosis [3], or retinitis pigmentosa, retinoschisis or choroidal atrophy.

Case Report

A 40 year male, came with complaints of diminution of vision in both eyes for near since few months and had no history of ocular trauma or intraocular inflammation. Visual acuity was 6/6 and N6 with correction in both eyes. Slit lamp examination in both eyes showed normal anterior segments with no signs of inflammation. Fundus examination performed with 90 D-lens and indirect ophthalmoscope was unremarkable in left eye, but in right eye a single oval cyst was floating freely in vitreous cavity (Figure 1).

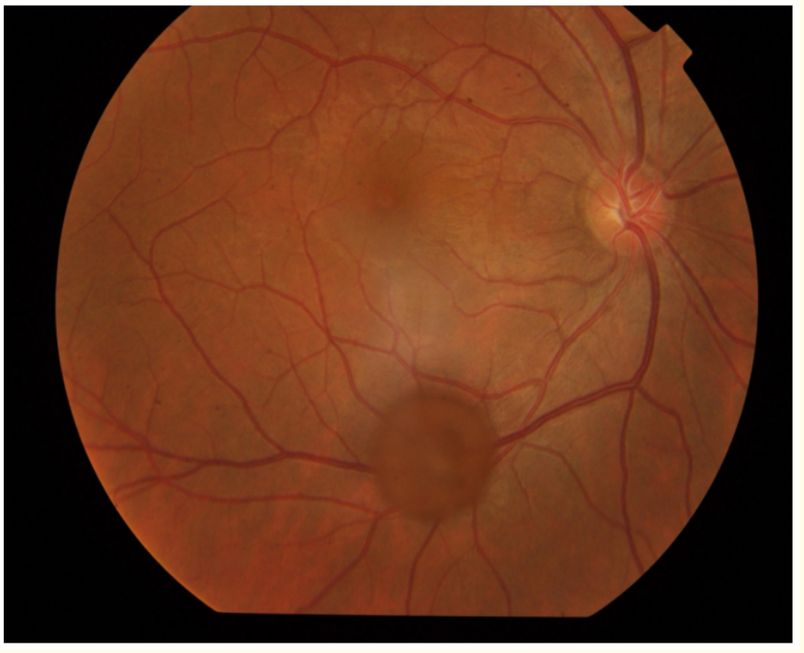

Figure 1: *Slit lamp biomicroscopy of the patient showing pigmented oval cyst.*

Cyst was spherical, smooth and was brown in colour, partially masking underlying retinal vasculature (Figure 2) and was freely mobile.

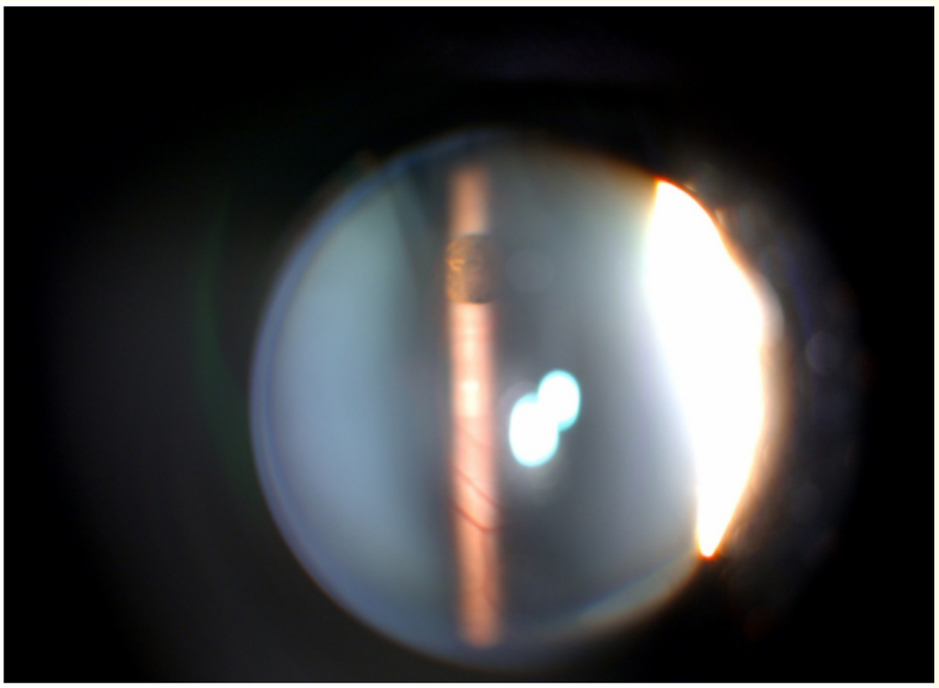

Figure 2: *Fundus picture showing cyst masking the underlying retinal vasculature.*

B-scan ultrasound revealed a round-shaped cyst (Figure 3) that was free from surrounding vitreous strands or retina and localised at the posterior vitreous and echo free in nature. Fluorescein angiography (FA) ruled out presence of intra and overlying vascularisation of the cyst. Fluorescein angiography showed a clear-edged hypofluorescence due to a pre-retinal masking effect. Serology for toxoplasmosis was negative. Eosinophilia was not detected in peripheral blood smear. After all examinations, a diagnosis of congenital pigmented vitreous cyst was done. Patient was prescribed presbyopic glasses and advised routine follow up.

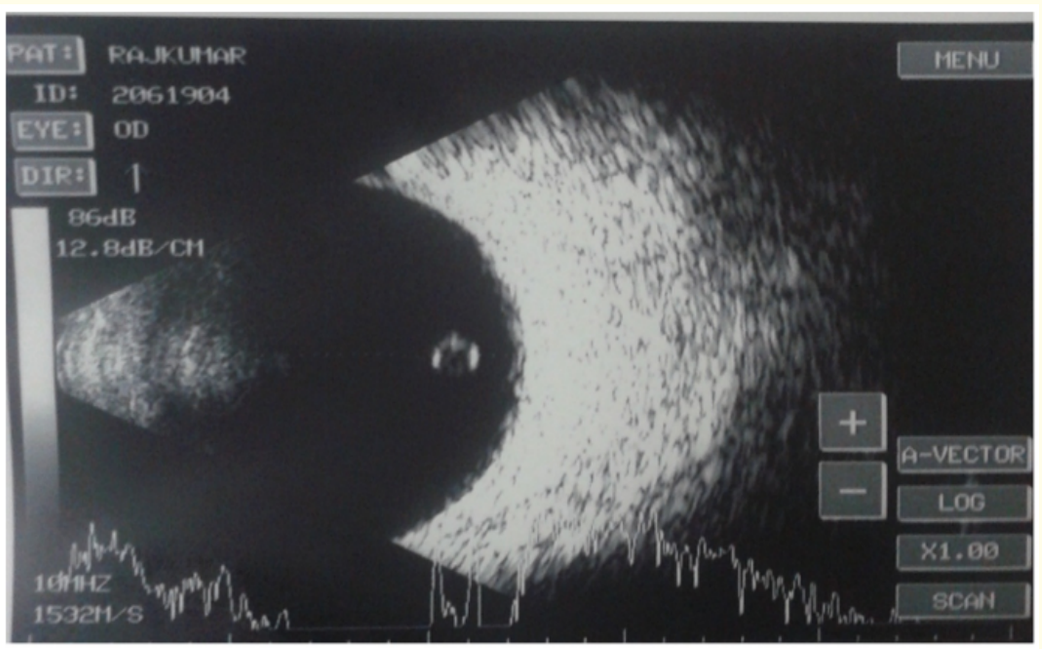

Figure 3: *B-scan picture of the patient showing well defined structure suggestive of cyst.*

Discussion

Tansley [4] first described free floating vitreous cyst in 1899. Intravitreal cysts are divided into congenital and acquired cysts. Congenital cysts are associated with residues of hyaloid vascular system and are occasionally present in normal eyes noticed incidentally on routine ocular examination. These cysts are either pigmented or non-pig¬mented [5] depending upon its site of origin. They have a smooth surface, are pedunculated or sessile, and located anterior to optic disc. Some congenital cysts can be limited in movement due to vitreous strands that attach them to optic disc. Acquired cysts are more often associated with some type of trauma, inflammation due to intraocular infection, such as parasitic vitritis and uveitis, toxo-plasmosis, or retinitis pigmentosa, retinoschisis or choroidal atrophy.

In cases of patients with trauma, cyst is mostly transparent, but its wall may be pigmented. Trauma may cause cyst to come into visual axis. Due to this phenomenon, patients may become symptomatic after trauma though role of trauma remains unclear. Trauma may trigger cyst formation or dislocate an already formed cyst and cause patient to become symptomatic. If a patient is symptomatic because of cyst coming into visual axis laser photocystotomy can be resorted. Treatment is deferred in patients who are asymptomatic and is followed up regularly. It can be treated either by pars plana vitrectomy with cyst excision or by laser disruption by argon laser [6] or Nd:Yag laser [7]. As our patient did not exhibit visual symptoms, laser cystotomy or surgical removal of cyst was not performed and regular follow up was advised.

Nork and Millecchia [8] suggested hyaloids system as cyst's origin by histopathological a finding which says cyst is a choristoma of primary hyaloids system. By studying aspirated pigmented cyst by light and electron microscope Orellana., *et al*. [9] observed that pigmented layer of cuboidal cells contains mature as well as immature melanosomes which suggests cyst originates from pigment epithelium. Cruciani., *et al*. [10] reviewed literature for morphologic and clinical correlations. Size of cyst ranged from 0.15 to 12 mm. They were spherical, oval or lobulated and surface was smooth or crenated.

Though vitreous cysts have minimal clinical significance they must be differentiated from tumours like malignant melanoma as well as parasitic cysts such as cysticercosis. B scan ultrasound and serological tests are helpful to make correct diagnosis.

Conclusion

Solitary vitreous cysts are rare clinical findings. They can be observed in normal eyes or associated with previous eye pathology. When vitreous cyst is present into the visual axis area or comes into visual axis it can cause blurred vision or disturb visual function. An emphasis on thorough clinical examination with ancillary investigations if necessary is used for differentiating this rare condition.

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