CASE REPORT

Asymptomatic free-floating vitreous cyst masquerading as cysticercosis

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SUMMARY

A male patient aged 37 years, referred with the diagnosis of right eye intravitreal cysticercosis, was diagnosed as asymptomatic free-floating vitreous cyst after thorough evaluation. The patient was kept under observation, since baseline visual acuity was unaffected. No change was noted over the period of 6 months.

subcapsular cataract was made in the right and left eyes, respectively.

INVESTIGATIONS

A complete haemogram, including blood counts, ESR and peripheral smear, were normal. Serology for Toxoplasma, Toxocara and cysticercosis was negative. Chest X-ray was normal.

BACKGROUND

Tansley¹ first documented vitreous cyst in 1899. Vitreous cysts can be either congenital or acquired and are commonly seen in the first or second decades of life. While congenital vitreous cysts are not associated with underlying ocular pathology, acquired cysts have been reported in various ocular conditions like high myopia, degenerative retinal and choroidal pathologies,² ocular trauma and inflammatory conditions like intermediate uveitis³ and Toxoplasmosis.⁴ Herein, we report a case of asymptomatic free-floating vitreous cyst, which was misdiagnosed as cysticercosis. This case highlights the importance of thorough clinical evaluation and relevant investigations of such cysts to reach the accurate diagnosis.

DIFFERENTIAL DIAGNOSIS

Malignant melanoma² is an important differential to be kept in mind in cases with pigmented cysts, especially when they occur near to the surface of the retina. Cysticercosis is a possibility in grey and opaque appearing cysts.⁵ As previously reported, hypothesis of association of cyst with primary hyloid system such as Mittendorf's dots or Bergmeister's papillae is the other possibility.⁶

TREATMENT

The patient was apprised of the situation and reassured in view of good visual acuity. Glasses were prescribed and the patient was advised regular follow-up.

CASE PRESENTATION

A male patient aged 37 years was referred to our centre with diagnosis of intravitreal cysticercus in his right eye. The patient reported diminution of near vision in both eyes since the previous 2 months without any associated pertinent ocular and systemic symptoms. He denied any previous history of trauma or ocular surgery. The best-corrected visual acuity was 20/20 and 20/40 in the right and the left eye with correction of +1.0 dioptre sphere/+0.5 dioptre cylinder at 180 and -0.5 dioptre sphere, respectively. Pupils of both eyes were normally reacting and intraocular pressure was 14 mm Hg. In the right eye, the anterior segment was normal and no signs of any intraocular inflammation were observed. After dilation of the pupil in the right eye, a spherical, thin-walled, translucent, freely floating pigmented cyst of size 4.5 mm was noted in the anterior vitreous (figure 1A). Rest of the fundus was normal (figure 1B). On ultrasonography, B scan of the right eye showed a well-defined cyst in the anterior vitreous without any internal hyperechogenicity (figure 1C). Moderate spikes were noted from the anterior and posterior walls of vitreous cyst on the corresponding A scans. The left eye was unremarkable apart from the presence of paracentral posterior subcapsular cataract (figure 1D). A diagnosis of the free-floating pigmented vitreous cyst and posterior

OUTCOME AND FOLLOW-UP

No changes were observed over a period of 6 months.

DISCUSSION

Vitreous cysts encompass a wide spectrum of presentation, including single unilateral, single bilateral or multiple unilateral, and may be either pigmented or non-pigmented. The origin of these cysts is unknown. The most accepted theory for the origin of pigmented cyst is from pars ciliaris epithelium and for non-pigmented cysts, the origin is from the choristomas of hyaloid system resulting from persistence or incomplete regression of the primary hyaloid artery.^{7 8} In our patient, the presence of posterior subcapsular cataract in the other eye may point towards their origin, from the primary hyaloid system such as Mittendorf's dots.

The congenital vitreous cysts are usually benign and non-progressive in nature. They are mostly asymptomatic and discovered on routine examination. While most require no treatment, the patients with disabling visual symptoms like floaters or transient blurred vision with head movements may require treatment. The treatment may be in the form of Argon or Nd:YAG laser-assisted cystotomy,⁹ cyst aspiration through pars plana or pars plana vitrectomy with cyst excision.¹ The importance of a congenital vitreous cyst lies in differentiating them from acquired cysts to avoid subjecting

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Figure 1 (A) Spherical, thin-walled, translucent, freely floating pigmented cyst in the anterior vitreous. (B) Normal fundus except the presence of cyst. (C) Ultrasound B scan picture of the right eye showing a well-defined cyst in the anterior vitreous without any internal hyperechogenicity. (D) Clinical picture of the left eye showing paracentral posterior subcapsular cataract.

patients to unnecessary investigations and treatment. Acquired cysts are usually creamy-white and are associated with intraocular inflammation. Pigmented cysts have to be differentiated from neoplasms like malignant melanoma or medulloepithelioma, especially if attached to the ciliary body. In our case, lack of inflammation associated with unremarkable medical and surgical history were strongly in favour of congenital origin of the cyst, despite the presence of a whitish spot on the surface of the cyst, which could be easily mistaken for scolex. The majority of the patients with intraocular cysticercus, however, have signs of intraocular inflammation and they tend to present with poorer vision.¹⁰ Even the eyes with posterior segment cysticercosis which presenting early, inflammation tends to increase over a period of weeks, eventually leading to retinal detachment. The same was not seen in our patient over 6 months of follow-up.

To summarise, though free-floating vitreous cysts are usually asymptomatic and have little clinical importance, they must be differentiated from symptomatic acquired vitreous cysts. Careful clinical examination and relevant investigations may help to distinguish these two.

Learning points

- ▶ Pigmented free-floating vitreous cysts in the anterior vitreous may be asymptomatic and may originate from the hyaloid system.
- ▶ Not all vitreous cysts are cysticercosis. Thorough clinical evaluation can save the patient from unnecessary distress.
- ▶ Primary management of congenital vitreous cyst is an observation unless visually disabling.

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