
SHORT COMMUNICATION

Case report

Management of free floating iris cysts in the anterior chamber: A case report

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PURPOSE. *To present a case with free iris cysts in the anterior chamber and its management with YAG laser.*

CASE REPORT. *A 14-year-old boy presenting with the complaint of seeing a small ball-like moving mass in his left eye.*

RESULTS. *Slit-lamp examination revealed a pair of free-floating iris cysts located inferiorly in the anterior chamber. After YAG laser application both the cysts collapsed.*

CONCLUSIONS. *This is the first report of a case with multiple free iris cysts in the anterior chamber. Considering the possibility of endothelial damage in the long term, it is worth noting the favorable response to YAG laser treatment. (Eur J Ophthalmol 2003; 13: 212-4)*

KEY WORDS. *Iris cyst, YAG laser*

Accepted: September 16, 2002

INTRODUCTION

Iris cysts are classified as primary, i.e. developmental, or secondary, i.e. subsequent to surgery or penetrating trauma due to implantation of epithelial cells from the ocular surface. These lesions are also referred to as epithelial implantation cysts (1). The primary cysts are further divided into pigment epithelial or stromal types (2). Primary iris stromal cysts are less common and mostly congenital (3). Most arise from the iris pigment epithelium in adults but iris stromal cysts characteristically appear in young children (4), and cysts of the pigment epithelium are believed to originate from failure of fusion of the two posterior epithelial layers of the iris (2).

Here we describe a case with free-floating iris cysts in the anterior chamber, and its management.

Case report

A 14-year-old boy presented, with the complaint of seeing a small ball-like floating mass in his left eye

and sudden changes in vision due to the mass moving across the visual axis. He had no history of ocular trauma or previous surgery. Visual acuity was 20/20 OU. Slit-lamp examination of the right eye was normal but in the left eye there was a pair of free-floating iris cysts centered in the inferior quadrant of the anterior chamber (Fig. 1). The anterior surface of the cysts appeared to be in contact with the corneal endothelium although the overlying cornea was clear. When the head position changed these cysts moved around freely in the anterior chamber (Fig. 2). The angle structures on gonioscopy were normal in both eyes and no other cysts were visible in the ciliary sulcus visible. Intraocular pressure (IOP) was 14 mmHg OU. The fundus examination was unremarkable bilaterally. No other abnormalities were detected.

The patient was treated by laser cystotomy with the Nd:YAG laser. Topical pilocarpine 2% was applied, followed by YAG laser with a goniolens, focusing directly on the wall of the cysts (2.0-2.5 mJ/25 spots). The cysts first ruptured and then collapsed. There was no increase in IOP or other complications involving the cornea, iris or crystalline lens. Topical timolol maleate



Fig. 1 - A pair of free-floating iris cysts located inferiorly in the anterior chamber.

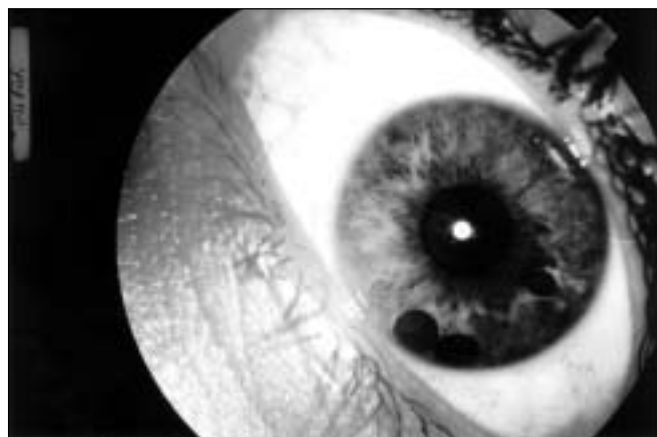


Fig. 2 - Movement of the iris cysts with tilting of the head.

(0.5%) twice a day and fluorometholone (0.1%) drops four times a day were given for two weeks. There was no recurrence during 23 months of follow-up.

DISCUSSION

Shields et al (4) believed that the iris stromal cyst was the most common iris cyst of childhood, and that the peripheral iris pigment epithelial cyst was a disorder of adulthood, occurring most often in women between 20 and 40 years of age; however, in their study of childhood iris cysts, the pigment epithelial cyst proved more common than the iris stromal cyst.

In some instances, an iris pigment epithelial cyst can become dislodged from its primary site and float freely in the vitreous or aqueous (5). Shields et al (4) reported two cases with free-floating iris cysts, one in the anterior chamber and the other in the vitreous, among 53 patients with primary iris cysts diagnosed before 20 years of age. These lesions move freely with changes in the position of the head or eyes and generally sink to a dependent position with gravity. Sometimes these floating cysts become fixed, usually in the angle inferiorly (4). In our case, multiple cysts moving freely around in the anterior chamber as the patient moved his head could be seen with the naked eye.

Although surgical excision, laser treatment, aspiration and cryotherapy were reported as alternatives for dealing with iris stromal cysts, generally no treatment

other than periodic observation is indicated for epithelial cysts (4, 6, 7). Pigment epithelial cysts of the iris usually do not cause any complications on account of their small size and stationary clinical course, and may remain unchanged or spontaneously regress (2, 8, 9). In rare cases, they may be so large that they come into contact with the corneal endothelium and cause varying degrees of visual impairment by covering the visual axis (10), so they need to be manipulated.

Tsai et al (11) reported needle aspiration and endodiathermy treatment of a recurrent epithelial inclusion cyst of the iris following a decrease in visual acuity due to occlusion of the pupil. Kawaguchi et al (1) treated a recurrent giant iris cyst with intracyst administration of mitomycin C. Verma et al (7) reported the surgical removal of an iris pigment epithelial cyst floating freely in the anterior chamber because it disturbed near vision when it moved across the visual axis. This specific symptom of disturbed vision can be accepted as an indication for surgery. In our case, the patient's disturbance because of the sudden vision changes due to movement of the cysts, and their risk of close contact with the corneal endothelium were the main indications for treatment.

Although Tsukamoto et al (12) reported that photocoagulation of iris cysts can cause a rise in IOP believed to be due to clogging of the trabecular meshwork by released viscous contents of the cyst, in our case IOP did not rise after treatment. It has also been reported that since the original structure and func-

tion of the epithelial lining of the cyst remains unchanged, recurrence is common after photocoagulation (12). However no recurrence occurred in this patient in a relatively long (23 months) follow-up.

Kuchenbecker et al (13) performed laser iridocystotomy using the Nd:YAG and argon laser for bilateral acute angle-closure glaucoma secondary to iris cyst. They too reported no recurrence in the follow-up. We too preferred laser cystotomy with Nd:YAG as we felt it was the least invasive procedure to eliminate an iris cyst. The procedure was safe and easy and no complications arose during or after the treatment and, as already mentioned, no recurrence in the 23 months of follow-up.

Free iris cysts are a rare entity and to our knowledge this is the first report on multiple free-floating cysts of the ciliary epithelium. Considering the possibility of visual disturbances and the risk of endothelial damage in the long term, these cysts can easily be treated with the Nd:YAG laser.

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