CONSERVATIVE SURGICAL MANAGEMENT OF A POST-TRAUMATIC IRIS CYST

TRATAMIENTO QUIRÚRGICO CONSERVADOR EN UN CASO DE QUISTE DE IRIS POSTRAUMÁTICO

MORENO-LÓPEZ M¹, ARRUABARRENA C¹, REGUERAS A¹, NOVAL S¹

ABSTRACT

Case report: A 32-year-old man with recent visual loss in his right eye, was found to have an iris cyst involving about 50% of the anterior chamber. He had been treated three years previously for a penetrating injury to that eye. The cyst was treated by aspiration, viscodissection and ab-externo photocoagulation, with this achieving a rapid recovery of vision and good anatomic results. At the six month follow-up visit the visual acuity remains stable with no signs of recurrence of the cyst.

Discussion: Conservative surgical treatment consisting of aspiration, viscodissection and photocoagulation appears to be an effective strategy to manage secondary anterior chamber cysts, achieving good anatomic and functional results (Arch Soc Esp Oftalmol 2007; 82: 455-458).

Key words: Iris cyst, penetrating trauma, aspiration and photocoagulation, surgical conservative treatment.

INTRODUCTION

Epithelial cysts of the iris stroma may be congenital or acquired (1). The latter develop from epithelial cells on the eye surface that penetrate into the anterior chamber through a surgical wound or piercing trauma. Once these cells are in the anterior chamber they may proliferate into a sheet or lead to a cyst. Small, asymptomatic cysts can be checked periodically to see how they evolve, but those that grow may become symptomatic, thus needing treatment.
Classic treatment consists of block excision (2,3) of the lesions, but carries a high risk of lesions to the adjacent structures, with serious side effects and poor results, especially with large cysts.

Several conservative surgery techniques have been described (4,5). We present a patient with a post-traumatic piercing cyst, occupying approximately 50% of the anterior chamber, treated with aspiration and ab externo photocoagulation during surgery, with good anatomical and functional results.

CASE STUDY

A 32-year-old male came to the emergency service because of a recent decrease in vision in his right eye, coinciding with the appearance of a light-brown lesion in that eye. The patient had suffered a penetrating trauma to the right eye three years earlier, which was sutured at our centre. On examination, he presented a visual acuity of 0.1 which improved to 0.5 with stenopeic opening. The biomicroscopy of the anterior segment showed an iris cyst occupying half of the anterior chamber, the anterior wall of which was in contact with the corneal endothelium, a linear 6 mm corneal scar respecting the visual axis, and transparent crystalline (Fig. 1). Intraocular pressure (IOP) was 14 mmHg in both eyes. Funduscopy was normal, as far as the exam could go, as was the B-mode ultrasound of the posterior segment.

The Stratus OCT image showed a thin anterior wall in discontinuous contact with the corneal endothelium and transparent cyst content (Fig. 2). The lesion was clinically diagnosed as an epithelial iris cyst. The patient was operated on by fine-needle (30 g) aspiration of the cyst, viscodissection of the cyst to separate it from the corneal endothelium and reshape the anterior chamber followed by ab externo photocoagulation of the collapsed walls during the same procedure, using high potency, long-lasting, non-confluent impacts until tissue retraction was seen. Neither intense cauterizing nor confluent treatment to avoid extensive atrophy of the underlying iris were carried out. The post-operative period showed moderate intraocular swelling that responded to hourly topical steroids; a large posterior synechia developed at the 12 o’clock position after the operation, but with no cataracts, as well as a significant improvement in vision (Fig. 3). Six months after the operation visual acuity was 0.8 and the biomicroscopic exploration showed a vertical oval pupil with posterior synechia from the 10 to 2 o’clock positions as the sole sequela. There were no signs of a relapse of the lesion (Fig. 4).

DISCUSSION

Complications deriving from the growth of a cyst in the anterior chamber include loss of vision, glaucoma, corneal decompensation and inflammation, among others (3).

Classical surgical treatment to completely eradicate the invading epithelium consists of block exci-
sion of the lesion in an attempt to prevent cells spreading into the interior of the eye ball with the accompanying relapse (2,3). The technique consists of a block excision of the affected iris, the *pars plicata* of the adjacent ciliary body as well as the cornea and sclera in contact with the cyst. Other authors follow the route of a posterior approach through a *pars plana* vitrectomy, with or without lensectomy and excision of the ciliary body and iris adjacent to the lesion. These aggressive surgical techniques carry significant risks, and offer poor functional and anatomical results.

Haller et al. (4) described a technique that consists of fine-needle aspiration of the cyst, viscodissection and endophotocoagulation. Honrubia et al. (5) previously described the aspiration and photocoagulation of these cysts but specifically pointed out the impossibility of treating them when they are very large and in contact with the corneal endothelium.

We present an iris cyst treated by a modified Haller technique, comprising the aspiration of the cyst, its viscodissection and application of *ab externo* photocoagulation during the same procedure. This modification is based on more laser absorption by the tissues when used on a perpendicular surface. This is not possible if endophotocoagulation is used through a corneal incision except if using a curved endolaser probe, with the risk of damaging the corneal endothelium. The laser power and the exposure time will depend on the iris’s pigmentation. We use the Eye Light from Alcon, which consists of a frequency-doubled YAG-Neodymium laser with a 532 nm wavelength. A strength of 280 mW and 1,500 msec were necessary to achieve tissue retraction.

The complications we have seen are moderate uveitis and immediate post-operative pain, both of which responded well to the pharmacological treatment used. The only sequela was the formation of posterior synechiae in the area treated, which could have been avoided by inserting a posterior chamber phakic lens between the iris and the crystalline while using the laser.

The technique that we propose is safe and allows for a second, less aggressive, intervention if relapse occurs, without worsening prognosis.

**REFERENCES**