CHOROIDAL EFFUSION AND RETINAL DETACHMENT AFTER CAPSULOTOMY WITH YAG-LASER

DESPRENDIMIENTO SEROSO DE COROIDES Y DESPRENDIMIENTO DE RETINA POSTERIOR CAPSULOTOMÍA CON YAG-LÁSER

CÁMARA-CASTILLO HG¹, NAVARRO-LÓPEZ P², RIVERA-SEMPÉRTEGUI J³

ABSTRACT

Case report: A 74-year-old woman presented complaining of blurred vision in her left eye. She had an anterior chamber lens in both eyes and an opaque posterior capsule in her left eye, for which a YAG-LASER capsulotomy was performed. Thirteen days later she re-presented with a choroidal effusion and a retinal detachment requiring surgery.

Discussion: There is no consensus as to the exact time at which a capsulotomy should be done. Timing of the procedure requires evaluation as a whole and consideration of the potential complications of IOL dislocation, recurrent uveitis, ocular hypertension and the most devastating choroidal effusion and retinal detachment (Arch Soc Esp Oftalmol 2006; 81: 333-336).

Key words: Capsulotomy, choroidal effusion, retinal detachment.

RESUMEN

Caso clínico: Mujer de 74 años, que acudió por visión borrosa. Pseudofaca con lente intraocular de cámara anterior en ambos ojos, y opacidad de cápsula posterior de ojo izquierdo, se realizó capsulotomía con YAG-LÁSER. A los trece días presenta desprendimiento coroideo y desprendimiento de retina que requirió intervención quirúrgica.

Discusión: El indicador para realizar una capsulotomía más usado es la disminución de la agudeza visual sin que exista una indicación precisa de cuando realizarla. Sin embargo; se deben de tener en cuenta las posibles complicaciones como son: desprendimiento de retina regmatógeno, dislocación del lente, uveítis recurrente, hipertensión ocular y complicaciones devastadoras como es el desprendimiento seroso de coroides y desprendimiento de retina.

Palabras claves: Capsulotomía, desprendimiento de seroso de coroides, desprendimiento de retina.
INTRODUCTION

The Yttrium Aluminium Garnet (YAG) laser is utilized for opening the posterior capsule in patients who have undergone cataract surgery. The visual acuity reduction is the most precise parameter for performing capsulotomies (1), with multiple complications being described. The objective of this study is to describe the case of a patient with choroidal effusion and retina detachment subsequently to capsulotomy and discuss the risks entailed by said procedure as well as its management and visual prognosis.

CASE REPORT

A 74-year old woman with a 15-year evolution of diabetes type 2, treated with oral hypoglycemia agents, who visits due to visual acuity reduction. In 1992 a cataract extra-capsular surgery was performed in the right eye (RE) and in 2001 in the left eye (LE) with anterior chamber lens of polymethylmethacrylate and entire capsule without knowing the cause to avoid using a posterior chamber intra-ocular lens (IOL).

A functional exploration showed a visual acuity (VA) of 0.6 in RE and 0.2 in LE, applanation intraocular pressure (IOP) of 14 and 15 mm Hg, respectively. The RE biomicroscopy revealed an IOL in the anterior chamber without further alterations. The anterior pole of the LE showed an IOL in the anterior chamber with a posterior capsule opacity of ++, the rest without alterations.

A capsulotomy was performed with YAG-LASER in the LE with a rating of 5.2 mJ (31 shots). A circular capsulotomy of 2x2 mm was made. Three days after the treatment, the patient exhibited a VA of 0.7 in the RE and 0.5 in the LE. The anterior and posterior poles had no alterations.

Thirteen days after the capsulotomy, the patient referred a sudden reduction in the LE visual acuity. Upon exploration, she exhibited a hand movement VA and IOP of 8 mmHg and a slight reduction in the size of the CD. Therefore a second dose of 2.71 mg of betametasone acetate and 3.0 mg of betametasone sodium phosphate was injected in the sub-Tenon space (fig. 4).

The choroid detachment was treated with prednisone 1.5 mg/kg/day (oral administration), with 2.71 mg of betametasone acetate and 3.0 mg of betametasone sodium phosphate (Celestote soluspan, Schering Plough, Mexico, D.F.) injected in the sub-Tenon space. Fourteen days later the patient had an IOP of 8 mmHg and a slight reduction in the size of the CD. Therefore a second dose of 2.71 mg of betametasone acetate and 3.0 mg of betametasone sodium phosphate was injected in the sub-Tenon space (fig. 4).

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Fig. 1: Regmatogenic RD. LE posterior pole showing tortuous vessels with general posterior pole elevation.

Fig. 2: CD. LE temporal region showing orange flat temporal sacs.
On day 19, the patient exhibited reduced inflammation in the choroidal detachment which was not resolved with conventional treatment, in addition to the retina detachment. Therefore, surgery was decided to drain the choroidal detachment, to perform a vitrectomy and silicone oil in the LE.

Three months after LE surgery, the patient exhibited a VA of CD 50 cm, IOP of 9 mmHg, middle midriasis, IOL in anterior pole, retina applied with fibrosis areas without traction and transparent silicone in vitreous cavity (fig. 5).

**DISCUSSION**

The decision for performing a capsulotomy is based on a variety of criteria. Some authors suggest visual capacity as the most reliable parameter for this procedure (1). However, to date there is no precise indication about the best circumstances to carry out a capsulotomy.

The literature has published important complications after this procedure, including dislocation of the lens vis-à-vis the vitreous cavity up to 16 months after the procedure (2), associated recurrent scleritis and uveitis, apparently related to the displacement of the lens haptics with ciliar body inflammation which responded to anti-inflammatory treatment (3).

Multiple papers have been published establishing a causal relationship between YAG-LASER capsulotomy and regmatogenous retina detachment, finding a risk of 5.8% in a 5-year term. However, lower percentages of 1.2% for 5 years have been found in patients who, prior to surgery, had an assessment of the periphery and treatment of predisposing lesions (4).

One publication reports an isolated CD associated to a YAG-LASER capsulotomy in a 70-year old patient without any predisposing factor, which occurred 5 days after the procedure and was resolved 15 days later without treatment (5).

Capsulotomy in a patient with a AC IOL is infrequent because it is implanted only when there is no adequate capsular remaining or the posterior capsule is completely absent. The reason for inserting a AC IOL with existence of posterior capsule is unk-
nown because it was not performed in our institu-
tion. Some explanations include zonular instability,
rupture of posterior capsule in inferior sector and
absence of posterior chamber IOL.

The AC IOL, added to the number, power and
size of the capsulotomy, probably have a causal
relationship with the regmatogenous RD and CD
which occurred 13 days after the procedure and for
which no co-existent pathology was found as cause
of these complications.

Steroid treatment was established and, when the
acute inflammation was under control, a surgical
procedure was decided even without response about
the size and location of the CD. We believe that the
presence of a AC IOL with whole posterior capsule
(an uncommon situation) and the need of perfor-
mapping a capsulotomy with anterior vitreous displace-
cement, could be related to the retina detachment
and low pressure which precipitated the CD. Howe-
ver, there are previous reports of CD without reg-
matogenous RD, and therefore the CD is not fully
explained.

Accordingly, at the time of performing a capsu-
lotomy, it is important to take into account the risks
for the patient and the possible need for a surgical
procedure with poor visual prognosis.

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