ARGON LASER IRIDOPLASTY AS TREATMENT OF PLATEAU-LIKE IRIS CONFIGURATION SECONDARY TO MULTIPLE CILIARY BODY CYSTS: LONG-TERM FOLLOW-UP BY ULTRASOUND BIOMICROSCOPY

IRIDOPLASTIA CON LÁSER ARGÓN COMO TRATAMIENTO DEL IRIS PLATEAU SECUNDARIO A MÚLTIPLES QUISTES DEL CUERPO CILIAR: SEGUIMIENTO A LARGO PLAZO CON BIOMICROSCOPÍA ULTRASÓNICA

RESUMEN

Caso clínico: Varón de 37 años de edad diagnosticado de cierre angular secundario a quistes neuroepiteliales del cuerpo ciliar. Se trató mediante iridoplastia periférica con láser argón y se realizó seguimiento mediante biomicroscopía ultrasonora (BMU). Inicialmente se consiguió una resolución del cuadro, pero a los 6 meses los quistes y el cierre angular secundario reaparecieron.

Discusión: La iridoplastia periférica con láser argón se ha propuesto como tratamiento en situaciones de bloqueo angular secundario a quistes neuroepiteliales del cuerpo ciliar. Sin embargo, los quistes y, secundariamente el cierre angular, podrían recidivar a largo plazo.

Palabras clave: Iridoplastia periférica, quiste neuroepitelial, cuerpo ciliar, iris plateau, biomicroscopía ultrasonora, cierre angular secundario.

ABSTRACT

Case report: We present a 37 year-old man with secondary angle closure by neuroepithelial ciliary body cysts. An argon laser peripherical iridoplasty was performed and ultrasound biomicroscopy (UBM) was employed to follow-up. Initially, the patient had a favorable response to treatment, but six months later the cysts and the secondary closed angle reappeared.

Discussion: Argon laser peripheral iridoplasty has been proposed as treatment of plateau-like iris configuration resulting from neuroepithelial ciliary body cysts. However, the cysts and, the secondary closed angle could recur in a long-term (Arch Soc Esp Oftalmol 2009; 84: 569-572).

Key words: Peripheral iridoplasty, neuroepithelial cyst, iris plateau, ciliary body, ultrasound biomicroscopy, secondary angle closure, plateau-like iris.
INTRODUCTION

The presence of cysts in the root of the iris and the ciliary body can generate a plateau iris configuration with the ensuing angular closure (1). Although finding a single cyst is quite common, in up to a third of cases the cysts can be multiple. When they affect an area exceeding 180º of the iris, as is the case with 10% of patients, glaucoma could develop due to angular closure (2).

Recently, it has been proposed to carry out an iridoplasty with argon laser for treating iris plateau produced by iridociliar cysts.

CLINICAL CASE

A 37 year-old hypermetrope male who in the course of a routine exploration exhibited an intraocular pressure (IOP) of 34 mmHg in the right eye (RE) and 32 mmHg in the left eye (LE). Gonioscopy revealed signs of angular closure in both eyes, which led to bilateral iridotomies with Nd:YAG laser. Two weeks later the angular closure signs persisted even though the iridotomies had patency and the IOP was of 33 mmHg (RE) and 36 mmHg (LE). An ultrasound biomicroscopy (BMU) was performed which detected an iris-plateau configuration with angular closure secondary to multiple iridociliar cysts (fig. 1). The cysts exhibited thin hyper-reflective walls with hypo-reflective liquid content, suggesting a diagnostic of neuroepithelial primary cysts.

It was decided to treat the LE with argon laser iridoplasty (impact size 500 µm, 0.5 seconds of exposure and 500 mW power). The same was offered for the RE but the patient preferred conservative treatment with pressure-reducing medication (timolole 0.5% at 12-hour intervals) awaiting the response to the laser treatment.

After iridoplasty the BMU was repeated, exhibiting the change from convex to concave of the iris root configuration as well as the disappearance of the cysts (fig. 2). The IOP went down to 17 mmHg without requiring treatment.

After one month, the IOP remained at 18 mmHg in LE without medication and 14 mmHg in RE with Timolole. The BMU showed a reappearance of the cysts in the laser-treated eye without producing a secondary angular closure (fig. 3). This persisted 6 months, when the iris plateau configuration reappeared in the LE and the IOP went up to 28 mmHg (fig. 4). At this point it was decided to treat this eye with pressure-reducing medication, following the prescription for the right one since it maintained adequate IOP levels (14 mmHg). The patient declined any other treatment other than medical, because he tolerated the medication very well and a IOP was adequately controlled.

Fig. 1: The arrows show the angular blockage secondary to the presence of neuroepithelial cysts, as well as a convex arrangement of the iris root.

Fig. 2: Image after the peripheral iridoplasty showing the absence of the cyst and the iris root configuration change.
At present, after 12 months follow-up, the patient exhibits an IOP of 14 mmHg in both eyes with Timolole 0.5% at 12-hour intervals. The BMU continues to show multiple neuroepithelial cysts in both eyes without increased in size or number and without clinical signs of angular closure.

**DISCUSSION**

Neuro-epithelial primary cysts are the most common form of ciliary body cysts. They are normally located in the iridociliary junction and exhibit a characteristic image in BMU. The prevalence of iris cysts is not known due to the lack of routine BMU explorations. However, in children and teenagers iridinal cysts are a common cause of secondary angular closure (4).

Different treatments have been proposed to eliminate neuroepithelial cysts such as peripheral iridoplasty with argon laser (3) and iridocistotomy with Nd:YAG laser. The former is an effective and safe treatment for the plateau iris syndrome and could be useful in the case of pseudo iris plateau induced by iridociliary cysts (3). In our case, argon laser treatment was initially efficient, changing the iridian configuration from convex to concave and causing the disappearance of the cysts. However, as this treatment does not go directly against the cyst wall, these are not destroyed giving rise to relapses after a short period of time (approximately 6 weeks). Previous studies had shown the possibility of utilizing this treatment in a similar situation, obtaining good initial results as in our case. However, none of the studies published to date report ultrasound and IOP long term follow-up after laser iridoplasty for treating the angular closure secondary to iridociliary cysts. If the treatment is unable to destroy the cyst walls, it is reasonable to think that in the long term these will reproduce and again displace the iris root in the anterior direction, closing the angle one more time.

Additional studies would be necessary, involving a larger number of patients, demonstrating the long-term actual efficiency of peripheral iridoplasty with argon laser for treating iris plateau secondary to iridociliary cysts.

**REFERENCES**