BROWN-MCLEAN SYNDROME AFTER INSERTION OF AN ANTERIOR CHAMBER INTRAOCULAR LENS: DESCRIPTION OF ONE CASE

SÍNDROME DE BROWN-McLEAN CON LENTE INTRAOCULAR DE CÁMARA ANTERIOR: DESCRIPCIÓN DE UN CASO

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ABSTRACT

Case report: We report one case of Brown-McLean syndrome.

Discussion: In this case, a 71-year-old male developed a Brown-McLean syndrome after implantation of an anterior chamber lens in one aphakic eye. A phacoemulsification procedure was performed in the other eye without development of corneal clearance alterations in the next 7 years. The cause of Brown-McLean syndrome is still unexplained. It is possible that it could develop in eyes with a genetic predisposition when these eyes are exposed to certain conditions, such as insertion of an anterior chamber lens (Arch Soc Esp Oftalmol 2007; 82: 315-318).

Key words: Brown-McLean syndrome; anterior chamber lens; genetic predisposition; aphakic; corneal edema.
INTRODUCTION

Brown-McLean’s Syndrome (BMS) is a condition progressing with a peripheral corneal edema, not involving the central corneal region, with a circumferential progression. It takes place usually after the lens intracapsular extraction, although it has also been reported after other lens surgical procedures (1) and even without any surgery history. The present article describes a BMS case after a secondary intraocular lens implant (IOL) of the anterior chamber (AC) in a patient suffering from aphakia.

CASE REPORT

A 71-year-old patient came to the hospital for a check-up before undergoing a secondary IOL implant on the right eye (RE) and cataract surgery on the left eye (LE). His ophthalmologic history included a RE aphakia caused by a trauma 25 years earlier, which resulted in the intracapsular traumatic cataract extraction. During exploration, the patient presented an improved visual acuity corrected on the Snellen scale for the right eye and counting fingers with the left eye. Biomicroscopically, he presented peripheral iridectomy at 12 hours, vitreous in the anterior chamber and aphakia. The corneal transparency was present in 360° at that time, while the patient presented no symptoms. The RE presented a NO4-P4-C1 cataract. The remaining ophthalmologic exploration was normal. During the first intervention, a LE phacoemulsification was performed under external anesthesia, with IOL implant in the posterior chamber. The postoperative progressed without any complications, with a corrected visual acuity after one month. Secondly, an anterior vitrectomy was performed with a lens implant in the anterior biconvex chamber of +18.5 diopters in the RE (STORZ, 121UV, PPMA, SN:2YXN17, 6 mm in diameter), with normal premature postoperative. Two months after the procedure, an improved corrected visual acuity was apparent, and the IOL on the anterior chamber was centered. Two years after surgery, the patient presented a peripheral corneal edema with microbullas not compromising the visual axis and brownish endothelial central pigmentation of the right eye (figs. 1 and 2). Central pachymetry was 520 μm. The central endothelium count with specular microscopy was 1,246 cells/mm². A treatment was prescribed with 5% sodium chloride ointment. On the other hand, the LE did not reveal corneal edema, neither peripheral nor central, seven years after the surgical procedure took place.

DISCUSSION

BMS is a rare pathology described at the end of the seventies, progressing with a corneal edema which extends itself to the corneoscleral limbo (2 to 3 mm) and typically not involving the visual central axis. It may be associated with an orange or brownish endothelial pigmentation with iridodonesis,
appearing more frequently in eyes with IOL in AC (2). When the symptoms appear, they are usually accompanied by a foreign body feeling and epithelial defects.

Its origin is uncertain; it has been linked to several types of lens surgery such as the extracapsular lens extraction, phacoemulsification, lensectomy pars plana and vitrectomy, the extracapsular lens extraction being the most frequent of all (1), although it has been also described in the absence of such surgical procedures [spontaneous reabsorption of the lens; lens subluxation, glaucoma due to angle closure and in one case of myotonic dystrophy (3).] In the present case, it is worth noting a trauma history on the right eye which resulted in the lens intracapsular extraction.

The onset for this condition since the time of procedure usually ranges from 6 to 16 years, having been described even 34 years later (4). In this patient, the edema showed more prematurely (2 years) with respect to the time of the IOL implant, although the patient suffered from aphakia for 25 years.

Other BMS cases have been described after IOL implants in AC [approximately 16 percent of patients in the Gothard series (1)], where even though peripheral edemas did not coincide with the haptic condition, as in this case, these could aggravate the development of the syndrome (2).

Bilateralization of this condition has been described after surgery on both eyes, which suggests a tendency to bilateralization. After more than seven years, the contralateral eye in this case preserved full transparency, which results again in the worsening of this condition when an IOL in AC is involved.

Generally, when symptoms appear, they are treated with hypertonic saline solution, external steroid lubrication, in some case suggesting stromal punctures as an alternative treatment (5).

In other words, even though the BMS etiology remains uncertain, it seems reasonable to assume that this is a syndrome based on individual susceptibility (possibly genetic), where an external factor (such as, for instance, an IOL implant in AC) results in the described clinical condition.

**BIBLIOGRAFÍA**