Giant string Elschnig's pearls

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Background. *Elschnig pearls are cells that migrate from the capsule of the lens and can cause posterior subcapsular opacity (PCO)*
Case: *29 years old male PO extracapsular cataract extraction two years ago, came for decreased visual acuity secondary to PCO. After the first capsulotomy 8 months ago, he developed giant Elschnig pearls at the edge of the capsulotomy forming a pearl necklace that caused poor vision again.*
Conclusion. *More studies are needed on the evolution of the disease to help assess the best time to give invasive treatment or wait for spontaneous disappearance of the pearls.*

Introduction. Posterior capsular opacity (PCO) is one of the main complications of extracapsular cataract extraction (ECCE) [1].

The emergence of PCO is frequently related to the formation of the Elschnig Pearls. These are cells of the anterior subcapsular epithelium that migrate from the equatorial germ zone of the lens to the posterior capsule, used as a lodging for the intraocular lens.

This capsule works as support for the settlement and proliferation of aberrant crystalline fibers. forming clusters of cystic formations, transparent, without a fixed pattern, resembling "pearls" and causing the so-called secondary cataract, which causes worsening of visual acuity, decreased sensitivity to contrast and glare [2]. These can appear after months, even years and spontaneously disappear [3].

Case report

A 29-year-old male came to an ophthalmology consultation due to decreased visual acuity and blurred vision. His antecedents were bilateral phaco refractive surgery with intraocular lens implantation at 28 years of age. After a year, a posterior capsular opacity was detected, so a capsulotomy with YAG laser was performed without complications. Eight months later he comes back again due to glare and poor vision in both eyes.

Upon examination, he had visual acuity is 20/200 OD and 20/300 OS, eye movements unaltered, eyelids and eyelashes normal, clear conjunctiva, transparent cornea, wide and shaped anterior chamber without cellularity, round and reactive iris, light reactive pupils and normal fundus.

Both eyes were pseudo phakic, with migration of abundant pearls from the edge of the posterior capsulotomies, forming giant pearls string from 50 to 6,500 μm. At the same visit, after dilating the pupil, the posterior capsule was opened along the vertical meridian and the horizontal meridian using Nd-Yag Laser, removing the pearls and restoring his 20/20 vision.

Discussion

Elschnig 's pearls are a common complication of extracapsular cataract surgery. In some cases, the growth of these crystallin fibrils occludes the entire capsulotomy opening [4]. This proliferation can also occur at the margins and reduce the size of the capsulotomy, resulting in blurred vision and decreased visual acuity, requiring repeated interventions, having a direct impact on the patient's quality of life [5]. As in the case with our patient, is the second time that opacification occurs in a relative short period of time, besides this, the size of these pearls is very large, spanning the axis of vision, causing a big visual defect, making all his activities very difficult to do. In 1997 Dr. Caballero [6] reported a series of cases of spontaneous disappearance of pearls several years after capsulotomy with YAG laser and Georgopoulos find that 45% of the cases of pearls in his study disappear too [7]. In another paper, Wolf Buehl and collaborators observed the short-term changes in the morphology of Elschnig pearls and report that there is a dynamic process that includes growth, reorganization and disappearance of pearls within 2 to 4 weeks and all the changes can occur simultaneously in many cases [8].

Recent studies related to this are required, long-term follow-up of this type of patients would be useful to evaluate the progression of this pathology. Also invest on research about how much time could wait until the spontaneous disappearance of this opacity aid making the best decision about giving or not invasive treatment such as Nd: YAG laser additional capsulotomy.

Conclusion

The concentric migration of thick pearls and the development of giant string cause a diffraction of light close to the visual axis, which ultimately affects visual acuity. Therefore, it is important to plan the initial size of the capsulotomy considering the potential new growth of Elschnig pearls.

Author Statement and Conflict of Interest. *Authors approve the manuscript and agree with what is expressed in it and do not have conflict of interest in this article.*

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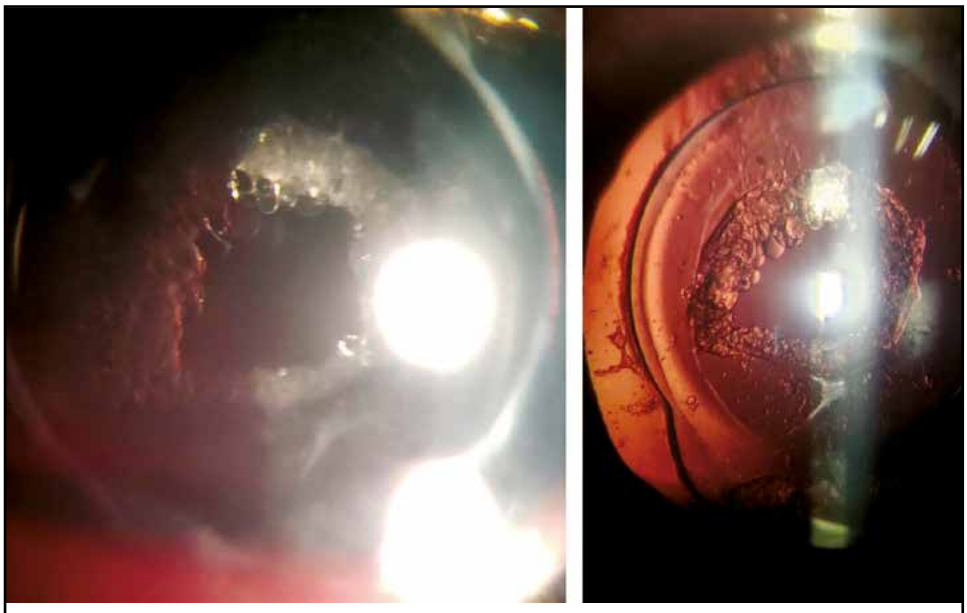
Pic 1. String of pearls of the right eye. B. String of pearls retro illuminated.



Pic 2. String of pearls of the left eye. B. String of pearls retro illuminated.