

Pseudoexfoliation on Intraocular Lens after Phacoemulsification

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Abstract

We report a case with deposition of pseudoexfoliation (PXF) material on intraocular lens 3 years after uneventful cataract surgery. The PXF material was found on the anterior surface of the intraocular lens in the patient. We have to carefully follow up patients with known pseudoexfoliation syndrome as it's essential to monitor the development of glaucoma, apparently deposition of pseudoexfoliation material continues even after cataract surgery.

Keywords: Glaucoma; Intraocular Lens; Pseudoexfoliation

Introduction

Pseudoexfoliation syndrome is a common age-related disorder of the extracellular matrix and occurs in approximately 3% to 8% of the adult population [1]. PXF is a systemic syndrome that targets mainly ocular tissues through the gradual deposition of fibrillary white flaky material mainly on the lens capsule, ciliary body, zonules, corneal endothelium, iris and pupillary margin.

Etiology is unknown. It may be a generalized disorder involving abnormal production or turnover of extracellular matrix in the basement membrane.

With relation to intraocular lenses (IOL), subsequent zonular instability and zonular dialysis develop which lead to spontaneous dislocation, anterior capsular contraction with decentration, and tilt of IOL [2,3]. Although it's rare, but deposition of PXF material on the intraocular lens has been reported [4-8]. We report a case about deposition of PXF material on intraocular lens 3 years after uneventful cataract surgery.

Case Report

A 68 year-old female presented in July 2020 to our outpatient clinic with complain of diminution of vision in both eyes. She had phacoemulsification cataract extraction with implantation of an intraocular lens in left eye since 3 years. On examination, the best-corrected visual acuity (BCVA) was 40/200 in right eye and 20/200 in left eye. The intraocular pressure (IOP) was 17 and 19 mm Hg in right and left, respectively without medication. Examination of right eye revealed dense nuclear cataract, PEX on the pupillary border of the iris

with poor dilatation and a cup/disc ratio of 0.6. Gonioscopy showed open angles. In left eye, a posterior chamber IOL was implanted in the capsular bag with PXF over the anterior surface of the IOL (Figure 1) and posterior capsular opacification. Fundus examination revealed a cup/disc ratio of 0.7. Gonioscopy revealed open angles.



Figure 1: Deposition of PXF on the anterior surface of the IOL.

“The radial striations disposition resembles the typical configuration seen in phakic eyes”.

Discussion

It's rare to find a pseudoexfoliative material on the IOL surface which has the radiate disposition resembles the typical configuration seen in phakic eye. It could be assumed that the stimulated tissues adjacent to the IOL result in deposition of pseudoexfoliative material on the surface of the IOL.

In our Case, the PXF showed radial distribution on IOL similar to that seen in phakic eye on the crystalline lens. Regarding the posterior capsular opacification, patient underwent Nd:YAG laser capsulotomy (Figure 2).

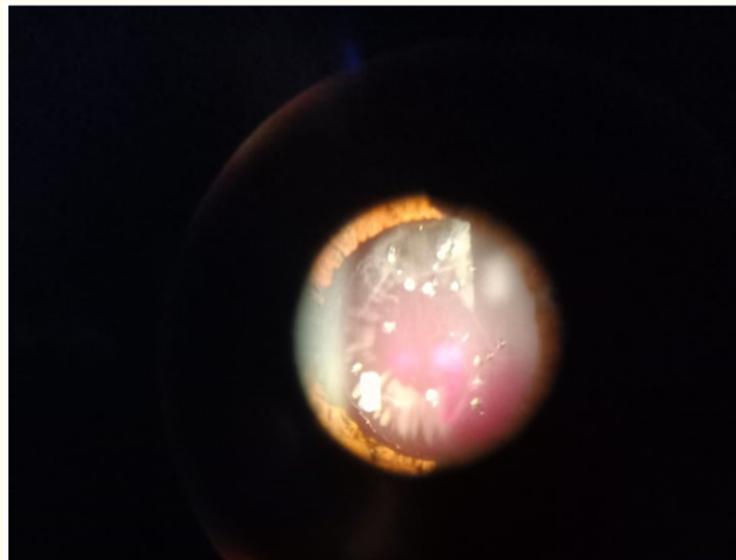


Figure 2: Post Nd:YAG laser capsulotomy “left eye”.

Stewart, *et al.* reported deposition of PXF on the anterior surface of an acrylic IOL [4]. Park, *et al.* described five patients diagnosed with primary open angle glaucoma, who ultimately presented PXF on the surface of IOL years after cataract surgery [9].

Ricardo António, *et al.* reported PXF deposits on the surface of posterior chamber IOLs in seven patients, the IOL was implanted in the ciliary sulcus in one patient and in the capsular bag in six patients [10].

Long term follow up for patients with PXF is mandatory to detect changes in intraocular pressure and to monitor glaucomatous changes.

Conclusion

Pseudoexfoliation continues during life time and deposition of pseudoexfoliation material occurs on the intraocular lens. The mechanism of deposition of pseudoexfoliation material on the intraocular lens is still unknown. Ophthalmologists have to continue follow up with patients having pseudoexfoliation syndrome throughout life.

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