



True Exfoliation of the Lens Capsule: A Case Report

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ABSTRACT

True exfoliation is a rare disorder associated with delamination of the superficial or all layers of the anterior lens capsule, appearing as a transparent membrane in the anterior chamber. Although exposure to excessive heat, ocular trauma, glaucoma and intraocular inflammation are implicated as main causative factors, exact etiopathogenesis is not clear. We report a case of true exfoliation of lens in a patient who presented with progressive painless loss of vision in both eyes for the last 2 years and had history of occupational exposure of intense heat.

Key Words: *True exfoliation; lens capsule; cataract surgery.*

INTRODUCTION

True exfoliation of the lens capsule is known to be associated with glassblower's cataract in which an anterior layer of the lens capsule delaminates and appears as a thin, fluttering membrane in the anterior chamber^[1]. It has traditionally been attributed to infrared radiation, inflammation, trauma, glaucoma, altered capsular protein but still exact etiopathogenesis is not clear^[2]. We describe a case of a patient whose primary complain was progressive painless visual loss due to cataract and true exfoliation of the lens in right eye was incidental finding.

CASE REPORT

A 60 year old male patient presented to our out-patient department with complain of progressive painless loss of vision for the last two years. He had no history of trauma to eyes and systemic illness. He had no family history of similar illness. His best corrected visual acuity was 4/60 in right eye and 5/60 in left eye. Slit lamp examination shown a membrane like structure in the anterior chamber in the pupillary area of right eye (fig1).



Figure 1. True exfoliation of the lens capsule

It was undulant in appearance upon eye movements and not attached to the cornea or iris at any point. There was nuclear sclerosis of lens of grade 3 with mild posterior subcapsular opacity in both eyes. Gonioscopy examination was normal in both sides. Fundoscopic examination revealed only mild retinal pigment epithelial alteration in the macular regions and reticular pigmentary degeneration of the peripheral retina bilaterally. His intraocular pressure was 16 mm of Hg on applanation tonometry in both eyes.

After taking informed consent, the patient underwent right cataract surgery with posterior chamber intraocular lens implantation in right eye. Post operative period was uneventful and now the patient is having unaided visual acuity of 6/9 in right eye.

DISCUSSION

True exfoliation or lamellar delamination of lens capsule is a rare disorder resulting in thin, fluttering capsular membrane on the anterior surface of the lens^[1]. The lens capsule is composed of layers of collagen fibrils with interfibrillary cement joining them together. Lens epithelial cells continue synthesizing collagen fibrils throughout their lifetime. It has been hypothesized that cement substance failure between the collagen fibrils that constitute the lens capsule, regressive changes in the collagen fibrils and degeneration of lens epithelial cells result in true exfoliation of lens^[3]. Age-related changes in the lens play major role in true exfoliation of the lens capsule because

true exfoliation is more common in older patients and also in idiopathic cases in the absence of history. However other factors like exposure to infrared radiation, ocular trauma, inflammation, glaucoma, and altered capsular protein are also found to be associated with true exfoliation of lens^[4,5].

The differential diagnosis of true exfoliation includes mainly pseudoexfoliation syndrome which involves fibrogranular deposition on various ocular structures like lens capsule, iris, ciliary body, zonules etc. Pseudoexfoliation is usually associated with ocular complications like glaucoma, lens dislocation and iris microvascular abnormalities. True exfoliation is usually not associated with these complications^[6].

Our patient was evaluated primarily for bilateral cataracts and true exfoliation of right eye was incidental finding. Since our patient was a agriculture field worker he had enough exposure of infra red radiation and heat. Infrared radiation exposure is known to increase the incidence of all type of senile cataracts^[7]. Age related changes and infrared radiation exposure possibly the two processes leading to true exfoliation of lens to the patient.

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