

Pattern of Presentation of Pseudoexfoliation Deposits on the Lens Capsule in a Tertiary Eye Hospital in Dhaka, Bangladesh

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Introduction: Pseudoexfoliation syndrome (PES) is an age-related systemic microfibrilopathy, caused by progressive accumulation and gradual deposition of extracellular grey and white material over ocular tissues.[1] These deposits are seen more commonly in the anterior segment of the eye, mainly the anterior lens capsule and iris.[2] PES can cause chronic open-angle glaucoma, angle-closure glaucoma, lens subluxation and blood-ocular barrier impairment.[2]

This study aims to provide data on the common pattern of presentation of pseudoexfoliation (PXF) deposits of the lens capsule in patients with PES and Pseudoexfoliation glaucoma (PEG) among the Bangladesh population.

Methods: This prospective observational study included all patients with PES/PEG screened in the glaucoma department of Ispahani Islamia Eye Institute and Hospital, Dhaka, Bangladesh from January 2018 – June 2018. Ethical approval for the study was obtained from the institutional review board of the hospital and adhered to the tenet of Helsinki Declaration. Clinical and demographic variables, pattern of presentation of

Pseudoexfoliation glaucoma and pseudoexfoliation syndrome, location of Pseudoexfoliation deposit on the lens surface and pupillary abnormalities seen with slit lamp examination were recorded and subsequently descriptively summarized.

Results: A total of 46 eyes of 27 patients with Pseudoexfoliation deposit were studied. There were 24 (88.9%) males and the mean age of the patients was 67.0 (± 10.8) years. Peripheral ring of Pseudoexfoliation (PXF) deposit was observed on the anterior lens capsule of 12 eyes (26.1%) while the central ring of PXF deposit was seen in only two eyes (Figure 1). However, Pseudoexfoliation deposits on the pupillary ruff (Figure 2) was the most common type of PXF deposit observed in 42 eyes (91.3%). Poor pupillary dilation was observed in only one eye.

Out of the 46 eyes of 27 patients studied, 25 eyes had cataract. There were also cases with subluxated lens (n=2), pseudophakia (n=4), aphakia (n=1). There were 22 patients with PEG and five patients with PES. Open angle glaucoma was the commonest glaucoma observed in 38 eyes (82.6%). The patients had mean baseline intraocular pressure (IOP) of 22.7 (± 12.7) mmHg and 17.5 (± 8.0) mmHg in the right and left eye respectively. Some patients were treated with medical treatment or trabeculectomy while those that had cataract were treated with combined trabeculectomy and small incision cataract surgery or combined trabeculectomy and phacoemulsification. The mean IOP after 2 months of treatment was 13.8 (± 7.9) mmHg and 15.8 (± 6.9) mmHg in the right and left eye respectively.



Figure 1: Pseudoexfoliation on the lens capsule showing the peripheral and central ring with an intermediate clear zone.



Figure 2: Pseudoexfoliation of the iris pupillary border

Conclusion: Bilateral involvement of pseudoexfoliation deposits was the predominant pattern seen in this study. However, other studies have reported that unilateral involvement is more common.^{3,4} Peripheral ring of PXF was seen as the classical deposit on the anterior lens capsule while the central ring of deposit was absent in most cases. This was similar to previous report findings.^{5,6} Poor pupillary dilation was rare. Rao *et al* also found only 30 eyes out of 84 eyes studied with poor pupillary dilation.⁷ Poor pupillary dilation may not be a universal pattern of presentation in patients with PES as previously believed. This study also found open angle glaucoma to be the common presentation in eyes with PXF associated with glaucoma. This finding is consistent with previous studies.^{8,9}

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