

Original article

Study of complications and difficulties encountered in patients with Pseudoexfoliation syndrome (PEX) undergoing cataract surgery

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Abstract:

Introduction: The aim of this study was to evaluate the intraoperative complications of cataract surgery in patients with pseudoexfoliation syndrome (PEX).

Materials and Methods: Cases of 100 eyes that underwent phacoemulsification cataract surgery at the Ophthalmology department in last one year. Patients with a history of previous ocular surgeries, ocular trauma, uveitis, glaucoma or corneal pathology were not included in the study. All cataract procedures were performed by the same surgeon.

Results: There were 51 (34.7%) males and 29 (38.6%) females among the PEX cataract patients. The incidence of pseudoexfoliation was similar in women (38.2%) and men (34.7%) ($p=0.660$). The mean age was 74.64 ± 6.8 in the PEX. Poor pupil dilation occurred intra-operatively in 60 (75%) of the patients with pseudoexfoliation . Intraoperative vitreous loss occurred in 7 (8.8%) PEX patients .

Conclusion: Surgeons should be aware of the potential complications of cataract procedures in patients with PEX. Caution should be taken at every stage of the surgery to prevent these complications, and surgeons should be knowledgeable and skilful in complication management should they arise.

Keywords: Pseudoexfoliation, cataract surgery

Introduction:

Pseudoexfoliation syndrome (PEX) is a condition characterized by the secretion of a gray-white, fibrogranular substance in the anterior part. The source of this ingredient is multifocal and is believed to appear to be part of the basal membrane components produced by aging epithelial cells [1]. PEX was clinically detected by anterior segment examination, and is defined as the detection of gray matter fibrogranular pseudoexfoliation in the anterior lens capsule and in the pupil edges [2, 3]. The frequency of PEX varies with population; however, the frequency of PEX increases with age and is believed to be the most significant correlation between age-related cataractous lens changes with PEX [4]. The aim of this study was to evaluate the intraoperative complications of cataract surgery in patients with pseudoexfoliation syndrome (PEX).

Materials and Methods:

Cases of 100 eyes that underwent phacoemulsification cataract surgery at the Ophthalmology department in last one year. Patients with a history of previous ocular surgeries, ocular trauma, uveitis, glaucoma or corneal pathology were not included in the study.

All cataract procedures were performed by the same surgeon.

Statistical Package for the Social Sciences 15 for Windows, a statistical software application (SPSS Inc.; Chicago, IL, USA) was used for statistical analysis.

Results:

Table 1) Age wise distribution of patients

Age (years)	Frequency
50-60	68
61-70	24
71-80	8
Total	100

In our study, maximum patients were in range of 50 to 60 years (68%).

Table 2) Gender wise distribution of patients

Gender	Frequency
Male	52
Female	48
Total	100

In our study, 52 % were male while 48% were female patients.

Table 3) Pupillary dilatation

	Frequency
<5 mm (poor)	60
5-6 mm (moderate)	15
>6 mm (good)	25

In our study, in 48.07 % patients pupillary dilatation was 5 to 6 mm, in 19.23 % patients was less than 6 mm while in 32.69 % patients was more than 6 mm.

There were 52 males and 48 females among the PEX cataract patients. The incidence of pseudoexfoliation was similar in women (35.2%) and men (34.7%) (p=0.660). The mean age was 61.70± 8.65 in the PEX . Poor pupil dilatation occurred intra-operatively in 60 (80%) of the patients with pseudoexfoliation . Intraoperative vitreous loss occurred in 11%PEX patients .

Discussion:

There are reports in the literature on the important relationship between PEX and cataract development; in addition, certain challenges of cataract surgery before PEX and an increased risk of complications have been reported 5. Complications during cataract surgery occur at a higher rate in pseudoexfoliation than in normal cataract cases due to increased glaucoma frequency and decreased pupillary dilation. . There is also a higher risk of zonular dialysis, capsule fracture, vitreous loss and IOL postoperative separation 6. It is more difficult to obtain adequate pupillary opening with cataract surgery in the eyes with PEX than regular eyes. Iris haemorrhage, corneal endothelial damage, lens dislocation, vitreous loss, posterior capsule fracture and sphincter fracture occur frequently in the eyes with insufficient opening of the intraoperative pupil during cataract discharge 1,5,7 .

Patients with cataracts considering surgery should be evaluated prior to surgery for pseudoexfoliation. Surgeons should be aware that there may be no pupillary opening and complications that may arise in patients with PEX during cataract surgery. Caution should be exercised during each surgical procedure to avoid these complications, and surgeons should be knowledgeable and competent in managing complications if they occur.

Conclusion:

Surgeons should be aware of potential complications of cataract procedures in patients with PEX. Caution should be exercised at all stages of surgery to prevent complications, and surgeons should be knowledgeable and competent in controlling complications.

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