

Original article:

Assessment of psuedoexfoliation in cataract patients and intraoperative modifications for successful surgery

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Abstract

Introduction: Psuedoexfoliation syndrome is a systemic condition usually seen as age related disease where fibrillogranular material called psuedoexfoliation material gets deposited on many ocular tissues causing iris depigmentation,phacodonesis,zonular dehiscence and poor pupillary dilatation leading to intraocular complications.

Aim: To study the eyes with psuedoexfoliation(PEX) in cataract patients and intraoperative modifications for surgery

Materials and methods: A prospective hospital-based study was conducted in 50 patients of gmc Aurangabad over a period of 12 months (28|06|2018 to 27|06|2019).

Results: In our study,all patients of cataract with psuedoexfoliation were seen in age group between 60 to 75years in majority(70%) .Type of cataract associated was nuclear(30%) more commonly.middilated pupils were seen in 50% of cases.IOL implanted in almost all patients(>90%)out of them 2were with SFIOL, and 2 were kept aphakic. Common complications were vitreous loss, zonular dialysis and posterior capsular tear.

Conclusions: Psuedoexfoliation presenting with cataract needs careful and proper preoperative evaluation and proper planning for a safe and successful surgery.

Keywords: Psuedoexfoliation, cataract, phacodonesis, surgery,posterior capsular tear.

Introduction:

Psuedoexfoliation syndrome occurs when several ocular tissues synthesize an abnormal protien¹. This is seen as deposition of whitish fibrillogranular material in and around the anterior segment of the eye like anterior capsule(6),pupillary margins,iris surface(2),corneal endothelium,ciliary processes and zonuls and anterior chamber angle.Its prevalence is seen commonly with age group of 65 to 75years of age And increases with age^{3,4}. It is seen all over the world with higher prevalence in some areas. Due to deposition of PEX material along the papillary margin and iris vasculature,iris atrophy occurs causing poor pupillary dilatation(6,7).If PEX gets deposited in a.c.angle ,it causes blockage of trabecular meshwork causing glaucoma(3).Thus exfoliative material changes anatomy and physiology of anterior segment causing increased risk of zonular dehiscence(5,10) and poor pupillary dilatation(7),capsular rupture and vitrious loss.(8)

Materials and methods:

It was a hospital based prospective study done at GMC Aurangabad within the period of 12 months (2018 TO 2019). Total 50 patients of cataract with PEX were included and patients with true exfoliation like traumatic cataract or infrared exposure cataract were excluded. Glaucomatous patients were also excluded. A detailed workup and careful slit lamp examination was done. SICS was done in all 50 cases. few additional modifications were done during surgery which caused increased postop inflammation and corneal endothelium damage(9) .

Results:

It is found that due to deposition of PEX material on corneal endothelium,iris,pupillary margin,lens capsule and zonules,cataract surgery became challenging to surgeons.Following are the observation.

In our study age group commonly seen was between 60 to 75 years with almost equal occurrence in both genders like a study by Arvind et al(11) showing the same as our study. But Avramides,Sakkias and Traindis(12) stated in his study that females are more affected with pseudoexfoliation.

Male patients	26(52%)
Female patients	24(48%)

Average age of the males was 68.85% and that of female was found to be 64.38%.

PEX seen in eyes with bilaterality is about 26% in total 50 cases

Right eye PEX	18
Left eye PEX	19
Bilateral PEX	13

IN our study various preoperative risk factors were noted because of which many intraoperative complications were taken in considerations than normal patients.Scorolli et al(15) also found in his study of 1052 patients that cataract patients with pseudoexfoliation have higher risk of intraoperative complications.

Most common problems in cataract patients with pseudoexfoliation in our study were found as follows

1.poor pupillary dilatation (in 50 cases)

Pupil size<6mm	25eyes
Pupil size>6mm	15eyes

2.iris involvement = no. of eyes(50)

Iris atrophy	8
Moth eaten appearance	10
iridodonesis	2
Posterior synechiae	10
Normal iris	20

3.type of cataract

Nuclear cataract	30
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Cortical cataract	2
Mixed cataract	15
Posterior subcapsular cataract	3

4.lens problems

PEX at lens capsule	23
phacodonesis	4
subluxation	2
Normal cataractous lens	21

5.modifications in surgery done

sphincterectomy	15
Anterior vitrectomy	4
synechiolysis	8
iridectomy	2

6.surgeries done

SICSwithPCIOL	46
SICS withACIOL	0
SICSwithSFIOL	2
Aphakia	2

Discussion:

All patients were studied post-operative day1,7 and 1 month.common complications were corneal haze and iritis on day 1 to 7 which were regressed till 1 month.In a study ,shashtri et al(14) also showed increased flare postoperatively.In our study, final vision after 1 month was within 6/60 to 6/9. Kuchle M et al(13)showed in his study of 436 patients that there are more intraoperative and postoperative complications with psuedoexfoliation.

Results

In this study,it was found that majority patients of PEX were in the age group of 60 to75 ys almost same preponderance in both genders.Almost 50% patients were with poor pupillary dilatation .cataract surgery was done successfully in almost all patients with necessary modifications.All patients with IOL were having good vision postoperatively.Aphakic patients were given spectacles.

Conclusion :

Psuedoexfoliation causes challenges in cataract surgery intraoperatively.it should be done under proper preoperative planning and with a thorough slit lamp examination for identifying possible complications.Careful post operative follow up to make out inflammation ,IOL decentrationand dislocation is required.proper planning of surgery with intraoperative modifications make the surgery easier and successful with great results.

References:

1. Becker- Shaffer Diagnosis and Therapy of Glaucomas (8ed, 2009)
2. Asano N, Schlotzer- Schrehardt U, Naumann GO. A histopathologic study of iris changes in pseudoexfoliation syndrome. *Ophthalmology* 1995;102: 1279-1290.
3. Hiller R, Krueger DE, Sperduto RD. Pseudoexfoliation, intraocular pressure and senile lens changes in a population-based survey. *Arch Ophthalmol* 1982;100:1080.
4. Aasved H. Mass screening for firillopathia epitheliocapsularis, so called senile exfoliation or pseudoexfoliation of the anterior lens capsule. *Acta Ophthalmol* 1971;49:334.
5. Freissler K, Kuchle M, Naumann GO. Spontaneous dislocation of the lens in pseudoexfoliation syndrome. *Arch Ophthalmol* 1995; 113: 1095-1096.
6. Watosn NJ, Winder S, Green FD. Pupil dilatation in pseudoexfoliation syndrome. *Eye* 1995;5:555-67.
7. Carpel EF. Pupillary dilatation in eyes with pseudoexfoliation syndrome. *Am J Ophthalmol* 1988;105:692-4.
8. Nadeem AR, Khan AH, Aftab M. Complications of cataract surgery in the patients with pseudoexfoliation. *J Ayub Med coll Abbottabad* 2009;21:33-6.
9. Pranathi K, Magdum RM, Maheshgauri R, Patel K, Patra S. A study of complications during cataract surgery in patients with pseudoexfoliation syndrome. *maharashtraJ.Ophthalmol*2014;
10. Schlotzer- Schrehardt U, Naumann GO. A histopathologic study of zonular instability in pseudoexfoliation syndrome. *Am J Ophthalmol* 1994;118:730-743.
11. Sekeroglu MA, Bozkurt B, Irkeç M, Ustunel S, Orhan M, Saracbası O. Systemic associations and prevalence of exfoliation syndrome in patients scheduled for cataract surgery. *Eur JOphthalmol.* 2008; 18:551-5.
12. Avramides S, Traianidis P, Sakkias G. Cataract surgery and lens implantation in eyes with exfoliation syndrome. *J Cataract Refract Surg.* 1997; 23:583-7.
13. Kuchle M, Schönher U, Dieckmann U. Risk factors for capsular rupture and vitreous loss in ecataract ecataract extraction. The Erlangen Ophthalmology Group. *Fortschr Ophthalmol.* 1989; 86(5):417-
14. Shastri L, Vasavada A. Phacoemulsification in Indian eyes with pseudoexfoliation. *J Cataract Refract Surg.* 2001; 27:1629-37.
15. Scorolli L, Campos EC, Bassein L, Meduri RA. Pseudoexfoliation syndrome. A cohort study on intraoperative complications in cataract surgery. *Ophthalmologica.* 1998; 212:278-80.

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