

ORIGINAL RESEARCH

Floppy Iris syndrome in patients taking Alpha1 Blocker

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ABSTRACT

Background: Selective α 1-blockers are commonly administered to patients with lower urinary tract syndrome and benign prostatic hyperplasia, but may increase the risk of intraoperative floppy iris syndrome (IFIS). **Aim:** To Assess the floppy iris syndrome in patients of BPH taking alpha 1 blocker. **Method:** 51 eyes of 45 patients who are known patients of benign prostatic hyperplasia taking alpha 1 blocker were evaluated for study. Occurrence of IFIS was noted during surgery. **Results:** In this prospective study we obtained data from 51 eyes of 45 Patients. All patients were male and taking alpha 1 blocker for BPH. About 45 % patients were having features of Intraoperative Floppy Iris Syndrome (IFIS). Incomplete IFIS was noted in 37.71% and complete IFIS was found in 08.80% patients. **Conclusion:** Selective alpha 1 blocker (Tamsulosin and Alfuzocin), which is a commonly prescribed medication for BPH patients is significantly associated with floppy iris syndrome during cataract surgery.

Keywords: Floppy Iris syndrome, Alpha 1 Blocker, Tamsulosin.

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INTRODUCTION

Intraoperative floppy iris syndrome is now a well known entity. It can be complete or incomplete. To meet complete Criteria we must have :

1. A floppy Iris that undulates in response to ordinary fluid currents
2. Repeated prolapse of the Iris
3. Progressive intraoperative constriction of Pupil (1).

It is very Important for all ophthalmologists to be aware of IFIS as it may lead to cataract surgery complications such as posterior capsule rent, loss of vitreous, Iris prolapse-- due to restricted field of surgery secondary to miosis(2,3). Studies done previously have reported an association between IFIS and intake of alpha blocker which are commonly given to patients of BPH Tamsulosin(1,4,5) and Alfuzocin (5,6) are independently associated with IFIS. Selective α 1-blockers are commonly administered to patients with lower urinary tract syndrome and benign prostatic hyperplasia, but may increase the risk of intraoperative floppy iris syndrome (IFIS). Present study aimed to assess the floppy Iris syndrome in patients of BPH taking alpha 1 blocker.

METHOD

In this study we enrolled 45 patients of Department of Ophthalmology who underwent phacoemulsification cataract surgery with implantation of Intraocular lens from a period of total 1 year (1st June 2022 to 31st May 2023).

DATA COLLECTION

Data were collected on specific parameter as shown in Box 1

Box 1: Data collected on Specific parameter

Preop data
Age
Sex
Current treatment for BPH- Alpha1 blocker
Duration of treatment

Box2: Peroperative Findings noted immediately after Surgery shown

Preop data
1. Any unusual billowing or floppiness of iris
2. Miosis
3. Occurrence of iris prolapse
4. Any other perop complications- PCR etc

After adequate dilatation with Tropicamide 0-5% and Phenylephrine hydrochloride 5% drops. Phacoemulsification with implantation of IOL was performed in all patients.

Table1: Occurrence of IFIS in our patients.

Age grp	No. of pt	Complete IFIS	Incomplete IFIS
61-65	13	-	5
66-70	22	2	8
71-75	10	2	4

Small pupil reported in 19 patients (42.2%) Floppy Iris reported in 16 patients (35.5%) PCR (complication) in 2 patients (4.4%)

DISCUSSION

Alpha1 blockers are commonly prescribed to patients with lower urinary tract symptoms and Benign prostatic hyperplasia but may increase the risk of IFIS. Our study results confirms the association of IFIS and alpha 1 blocker in patients of BPH .How ever approximately 50 % of our patients did not show any features of IFIS. The absence of IFIS has been previously noted in some patients receiving alpha 1 blocker (1). The results matches with the findings of previous studies (7,8). Duration of taking alpha 1 blocker was not found to be associated with IFIS. It has been suggested that discontinuing alpha 1 blocker before cataract surgery may be helpful in preventing occurrence of IFIS. For this need of more studies to be done. The IFIS can have a range of severity of iris pathology (10). Our results suggested the same. In our study we found that incomplete IFIS can behave like complete IFIS and requires similar management. It is important for all ophthalmologists to know whether a patient has increased chances for IFIS, So as to inform the patients preoperatively accordingly. our study has limitations. A large number of surgeons reported the IFIS cases (1,2,11,12 ,13,14). our attempt was to quantify IFIS in our cases. In conclusion we believe that the Floppy Iris syndrome manifests more in patients taking alpha 1 blocker. Here we would like to emphasize that not all patients taking alpha blocker will necessarily have IFIS. Wang et al in their studies on 6,488 cases to assess risk of intraoperative floppy iris syndrome concluded that IFIS seems inevitable with the usage of α 1-antagonists, and tamsulosin needs to be cautious due to the significantly higher risk of IFIS; on the other hand, doxazosin is not significantly related to severe IFIS. Although silodosin does not significantly decrease mesopic pupil diameter, there is no conclusive evidence to support the recommendation of the use of silodosin due to insufficient evidence on the IFIS after silodosin. Optimized studies are craved to address their relationships with severe IFIS. Ophthalmologists, urologists, and physicians should be aware of these safety signals, especially in patients at high risk. Ophthalmologists should routinely review patients' medical history and prepare themselves to

face an intraoperative emergency. Urologists and physicians may consider doxazosin as the first regimen, which resulted in less IFIS if patients are hypertensive or can tolerate the adverse effects.¹⁵

CONCLUSION

Selective alpha 1 blocker (Tamsulosin and Alfuzocin), which is a commonly prescribed medication for BPH patients is significantly associated with floppy iris syndrome during cataract surgery. Patients should be educated regarding potential adverse effects and discuss this with their health care providers prior to cataract surgery. In addition, health care providers should be aware of the adverse effect and take steps to reduce the risk of surgical complications.

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