



# Environs of Glaucoma

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## Introduction and Aim:

Primary open-angle glaucoma (POAG) is a neurodegenerative disease of the optic nerve, which causes progressive visual field loss, and is the second leading cause of blindness worldwide. The etiology of POAG is still under investigation, and is thought to be multifactorial. However, the only risk factor currently treated is elevated intraocular pressure (IOP). The aim of this study is two-fold. First, to examine the prevalence of various risk factors other than IOP amongst glaucoma patients versus a control group. Second, to investigate factors that influence patient compliance, knowledge about glaucoma, effects on lifestyle, and satisfaction with their glaucoma treatments.

## Methods:

In this IRB-approved prospective survey, two groups of patients were interviewed:

- Group A comprised of patients diagnosed with primary open angle glaucoma (POAG)
- Group B (controls) comprised of age- and gender-matched patients without POAG.

We collected information from all subjects on:

- age, gender, place of birth, body mass index, occupation, education level, family history, dietary habits, smoking, alcohol, and drug consumption, caffeine intake, supplement intake, exercise activities, stress levels, comorbidities, visual fields, and central corneal thickness.

In addition, Group A patients were specifically asked about:

- their understanding of glaucoma, compliance with treatments, their confidence in the treatments they were receiving, and how glaucoma had affected their lifestyle.

For each group, responses were summarized with descriptive statistics. Categorical variables were reported as frequencies and percent and compared between groups with the Fisher's Exact test. Continuous variables were summarized as mean and standard deviation and compared with two-sample t-tests.

## Results

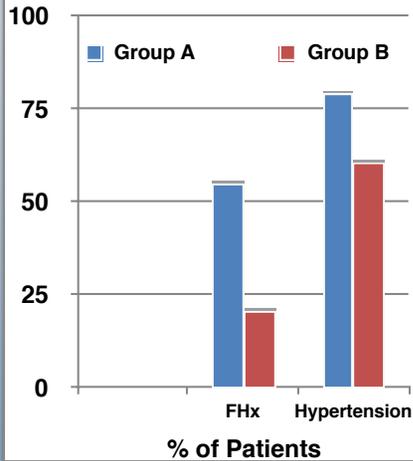
Of the 139 adults, there were 71 (61% male, 39% female) in Group A and 68 (66% male, 34% female) in Group B.

Group A patients were more likely to report a family history of glaucoma (54.9% versus 20.6%;  $p < 0.0001$ ) and a history of hypertension (78.9% versus 60.3%,  $p = 0.0260$ ).

Also in Group A, 48% had poor understanding of glaucoma, 32% were unsatisfied with their treatment plans and/or prognosis, 17% did not approve of their caregiver, 33% were non-compliant, 31% were concerned about drug side-effects, 37% did not like being on multiple drugs, 28% were concerned about drug costs, and 6% regularly missed appointments.

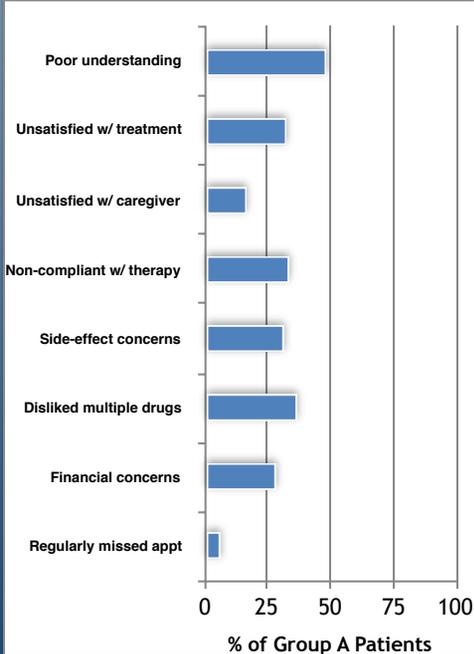
Demographics	Group A N=71 (%)	Group B N=68 (%)	p value
<b>Gender</b>			0.5977
Male	43 (60.56%)	45 (66.18%)	
Female	28 (39.44%)	23 (33.82%)	
<b>Ethnicity</b>			0.2812
Caucasian	27 (38.03%)	31 (45.59%)	
African	31 (43.66%)	28 (41.18%)	
Hispanic	6 (8.45%)	1 (1.47%)	
Asian	7 (9.86%)	8 (11.76%)	
<b>BMI</b>	Mean BMI 29.22 (+/- 6.57)	28.792 (+/- 6.62)	0.7018

## Risk Factors Affecting POAG



Family History (FHx):  $p < 0.0001$   
Hypertension:  $p = 0.0260$

## Factors Affecting Compliance and Prognosis in POAG Patients



## Discussion

In agreement with other studies, over half of patients with POAG reported a positive family history of glaucoma. The importance of the vascular component of glaucomatous optic neuropathy was stressed by the presence of systemic hypertension in 79% of patients. 48% of patients did not understand the gravity of glaucoma, and may have unknowingly succumbed to non-compliance.

## Conclusions

Based on our observations, current glaucoma practice falls short of intended positive outcomes. In addition, poor understanding of glaucoma, non-compliance, and systemic hypertension were widespread.

## References:

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## For further information

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