Journal Name:	Ophthalmology Research: An International Journal
Manuscript Number:	Ms_OR_125515
Title of the Manuscript:	A CROSS-SECTIONAL STUDY OF CAUSES OF SECONDARY GLAUCOMAS AT A TERTIARY EYE CARE CENTRE
Type of the Article	

## **PART 1:** Review Comments

<u>Compulsory</u> REVISION comments	Reviewer's comment	Author's Feedback (Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.		
Is the title of the article suitable? (If not please suggest an alternative title)		
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.		
Are subsections and structure of the manuscript appropriate?		
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.		
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.		

Ar. DEVICION		
Minor REVISION comments		
Is the language/English quality of the article		
suitable for scholarly communications?		
<b>,</b>		
Optional/General comments		
	Abstract and Introduction	
	The abstract effectively outlines the study's objective, methodology, results, and conclusion. However,	
	it could be enhanced by specifying the broader clinical implications of the study findings and elaborating on the study's contribution to existing literature. The introduction provides a strong	
	foundation by discussing the significance of secondary glaucoma (SG) and its prevalence globally.	
	However, the narrative could benefit from a more cohesive structure that transition smoothly between	
	global and regional statistics. Additionally, there is some repetition regarding the definition of SG, which	
	could be streamlined for better flow.	
	<b>Recommendation:</b> To strengthen the abstract, include a sentence or two on how the findings could	
	influence clinical practice or healthcare policy, especially in resource-limited settings. Consider integrating global and regional prevalence data more succinctly in the introduction to avoid redundancy.	
	Materials and Methods	
	The methodology section is generally well-structured, outlining the inclusion and exclusion criteria and	
	the detailed ophthalmic examinations conducted. The use of SPSS for statistical analysis is	
	appropriate, though the section could benefit from elaborating on the statistical tests used to determine	
	significance, particularly in relation to the findings (e.g., p-values, chi-square test). The exclusion of	
	primary glaucoma cases is clearly justified, ensuring the study focuses solely on secondary glaucoma.	
	<b>Recommendation:</b> Providing more details on the specific statistical tests applied to analyze the data would add rigor to this section. Additionally, a brief discussion of potential confounding variables and	
	how they were controlled (or if not, acknowledging the limitation) would enhance transparency.	
	Results	
	The results section is detailed and presents findings in a clear and organized manner. The use of	
	figures and tables to depict gender distribution, laterality, age distribution, and causes of SG is helpful	
	for readers. The most common cause of SG being pseudoexfoliation glaucoma is an important finding,	
	especially since it is age-related and easily missed during early clinical evaluations. However, the results could benefit from more comparative analysis, such as statistical significance between different	
	causes or demographic factors.	
	<b>Recommendation:</b> Consider adding more statistical analysis to explore associations between	
	demographic factors (e.g., age, gender) and specific causes of SG. Highlight any significant findings in	
	relation to these variables, which could offer more insight into disease patterns.	
	Discussion The discussion are a sixth to be a set of the first three within the second of existing literature described as	
	The discussion appropriately contextualizes the findings within the scope of existing literature, drawing comparisons to similar studies in India and globally. The emphasis on pseudoexfoliation glaucoma and	
	post-vitreo-retinal surgery as common causes of SG aligns well with current clinical trends. However,	
	the discussion could benefit from further elaboration on the public health implications of these findings.	
	Specifically, the study's results indicate the need for targeted screening programs for elderly	
	populations and improved post-operative care following ocular surgeries, but this is not fully explored.	
	<b>Recommendation:</b> Expand the discussion to include specific public health recommendations, such as	
	policy initiatives for routine screening in older adults and guidelines for managing post-operative complications in cataract and vitreo-retinal surgeries. Additionally, the section could delve more into	
	potential reasons for the higher incidence of pseudoexfoliation glaucoma in this population compared to	
	other studies.	
	Strengths and Limitations	
	The authors appropriately mention the cross-sectional design as a limitation, acknowledging that it	
	prevents an understanding of the long-term progression and prognosis of SG. However, the study's	
	strengths, particularly its detailed examination of various causes of SG, are underscored effectively. <b>Recommendation:</b> While the limitations section is comprehensive, it would be helpful to suggest future	
	research directions more explicitly. For example, a prospective cohort study following patients over	
	time could provide more insights into the long-term outcomes of SG and the effectiveness of early	
	intervention strategies.	
	Conclusion The conclusion accurately summarizes the key findings but could benefit from a more	
	pointed focus on clinical practice and policy recommendations. The statement on the importance of	

early diagnosis and prompt treatment is crucial, but it could be expanded to offer practical suggestions for healthcare providers, particularly in low-resource settings.

**Recommendation:** Strengthen the conclusion by explicitly discussing how healthcare systems can implement early screening and intervention strategies to reduce SG-related blindness. For instance, propose specific interventions such as awareness campaigns for pseudoexfoliation glaucoma or training for ophthalmologists to detect subtle early signs of SG in elderly patients.

The research titled "A Cross-Sectional Study of Causes of Secondary Glaucomas at a Tertiary Eye Care Centre" presents an analysis of 52 cases of secondary glaucoma (SG) diagnosed and treated at a tertiary eye care center over a period of 2 years. **Key Points** 

 Pseudoexfoliation glaucoma was the most common cause of secondary glaucoma, found in 28% of cases

Other significant causes included:

- Glaucoma after cataract surgery (13%)
- Glaucoma after vitreoretinal surgery (13%)
- Lens-induced glaucoma (8%)
- Steroid-induced glaucoma (8%)
- Uveitic glaucoma (8%)
- Over 50% of secondary glaucoma cases occurred in the 60-70 age group
- Early detection and prompt treatment are crucial to prevent severe visual impairment from secondary glaucomasThe study aimed to determine the common causes of secondary glaucoma in this population.

#### Strengths:

Summary

- 1. The study provides a detailed analysis of the demographic data, including age, gender, and laterality of the affected eyes.
- 2. The study includes a comprehensive examination of each patient, including visual acuity, intraocular pressure measurement, anterior segment evaluation, fundus evaluation, and gonioscopy.
- 3. The study uses statistical analysis to present the data in a clear and concise manner, including the use of charts and tables.
- 4. The study discusses the implications of the findings in the context of previous research and clinical practice.

#### Limitations:

- 1. The study has a relatively small sample size, which may limit the generalizability of the findings to other populations.
- 2. The study does not provide information on the duration of follow-up or the outcomes of the patients, which would be important in understanding the long-term implications of the diagnosis and treatment of secondary glaucoma.
- 3. The study does not discuss the potential confounding factors that may influence the diagnosis and treatment of secondary glaucoma, such as comorbidities, medication use, and lifestyle factors. Peer Review

#### **Recommendations:**

- 1. The authors should consider expanding the discussion to include a more detailed analysis of the clinical features and outcomes of the different types of secondary glaucoma identified in the study.
- 2. The authors should consider including more information on the diagnostic criteria and methods used to diagnose secondary glaucoma, as well as the specific treatments used in each case.
- 3. The authors should consider including more information on the demographic and clinical characteristics of the study population, including age, gender, and comorbidities, to provide a more complete picture of the patients diagnosed with secondary glaucoma.
- 4. The authors should consider including more information on the long-term outcomes of the patients, including visual acuity, IOP, and the need for additional treatments or surgeries.
- 5. The authors should consider discussing the potential implications of the findings for clinical practice and public health, including the importance of early diagnosis and treatment of secondary glaucoma to prevent visual impairment and blindness.

Overall Comments

This study provides valuable insights into the causes of secondary glaucoma in a tertiary care setting, with pseudoexfoliation glaucoma emerging as the most prevalent type. The findings are in line with global trends but also highlight region-specific patterns, which could inform localized public health strategies. However, while the study is methodologically sound, certain areas could be improved to enhance the clarity and impact of the work, particularly regarding statistical analysis and public health recommendations.

### Strengths:

- 1. Detailed analysis of various causes of secondary glaucoma.
- 2. Use of appropriate diagnostic tools and tests for SG classification.
- 3. Clear presentation of demographic data and trends in SG prevalence.
- 4. Good alignment with existing literature, enhancing the study's credibility.

#### **Areas for Improvement:**

- **1. Statistical Analysis:** More detailed reporting on statistical significance (e.g., p-values) and comparative analysis of demographic factors.
- **2. Public Health Recommendations:** Stronger emphasis on the implications of findings for public health interventions, particularly in the context of SG prevention and early detection.
- **3. Cohesion and Flow:** Reduce redundancy, particularly in the introduction, to improve the overall readability of the manuscript.

The study provides valuable insights into the causes and characteristics of secondary glaucoma in a tertiary eye care center population. The findings highlight the importance of early diagnosis and prompt treatment to prevent visual impairment and blindness due to secondary glaucoma. However, the study could benefit from a more detailed analysis of the clinical features and outcomes of the different types of secondary glaucoma, as well as a longer-term follow-up to understand the long-term implications of the diagnosis and treatment.

**Final Verdict:** This is a well-executed study with valuable clinical insights, particularly in understanding the epidemiology of secondary glaucoma. With minor revisions, particularly in statistical reporting and public health implications, the manuscript would be even more impactful in guiding both clinical and public health strategies to combat secondary glaucoma-related visual impairment.

### PART 2:

		Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	(If yes, Kindly please write down the ethical issues here in details)	

#### **Reviewer Details:**

Name:	Namrata Srivastava
Department, University & Country	ERA University of Allied Health Science, India