ORIGINAL RESEARCH PAPER

Ophthalomology

KEY WORDS:

A CASE SERIES OF COMMON RETINAL DISEASES IN A TERTIARY CARE RETINA CLINIC

Dr Aswini Kandasamy

Resident, Government Dharmapuri Medical College, Dharmapuri

AIM

A case series report on commonly encountered disease spectrum in a Tertiary care Retina clinic

Study Design

Observational case study

Place of Study

Department of Ophthalmology, Government Dharmapuri Medical college, Dharmapuri

Period of Study

MAY 2024 TO MAY 2025

Duration

One Year

Study Groups

Patients in Ophthalmology OPD fulfilling inclusion criteria are selected for study group after getting proper consent

Sample Size

100

Inclusion Criteria

1) All patients attending the Retina clinic with proven retinal findings (OPD or referred inpatient)
2) Patients of all age group , males , females and transgenders are included in the study
3) Patients who consented to participate

Exclusion Criteria

1) Patients not willing to participate in the study
2) Cases with opaque media
3) Patients with non-Retinal ocular disorders

MATERIALS AND METHODS

Patient fulfilling inclusion criteria after getting proper informed consent are evaluated in Retina Clinic as follows

1) Age
2) Sex
3) Visual acuity by Snellen chart
4) Best corrected visual acuity
5) Anterior segment Examination
6) Pupillary examination
7) Dilated Fundus Examination using 90D lens
8) Retinal peripheral examination using Indirect Ophthalmoscopy
9) INVESTIGATIONS : OCT Examination, Visual fields

OBSERVATION AND RESULTS

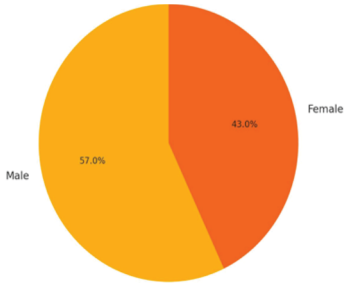
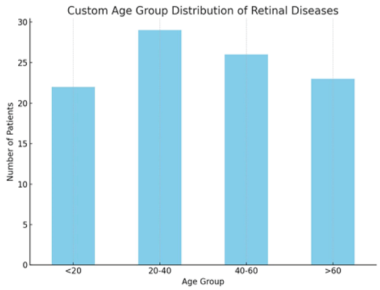


Figure 1- Gender Based Distribution

Out of 100 patients involved in this study 54 male (57%) & 47 Female (43%)

Age Wise Distribution

From the above chart 40 to 60 years are commonly encountered age group



Diagnosis Wise Distribution of Retinal Disease

Diabetic retinopathy being the most common of all manifestations

Retinal Diagnosis	Number of Patients
Diabetic Retinopathy	31
Retinal Vein Occlusion	13
Age-related Macular Degeneration	13
Retinal Detachment	8
Epiretinal Membrane	7
Retinitis Pigmentosa	7
Posterior Uveitis	7
Macular Hole	6
Central Serous Chorioretinopathy	6
Retinopathy of Prematurity	2

1. Diabetic Retinopathy (31%) Most prevalent condition, accounting for nearly one-third of all retinal cases. Reflects the growing burden of diabetes in the population.
2. Retinal Vein Occlusion (13%) Second most common vascular retinal pathology, often associated with systemic hypertension and aging.
3. Age-related Macular Degeneration (13%) Matches RVO in frequency. A leading cause of central vision loss in elderly patients.
4. Retinal Detachment (8%) An ophthalmic emergency that demands urgent surgical intervention to preserve vision.
5. Epiretinal Membrane (7%) A relatively frequent macular pathology seen in middle-aged and elderly populations, often presenting with visual distortion

CONCLUSION

1. Wide Spectrum of Retinal Diseases Observed The retina clinic at our tertiary care center managed a diverse array of retinal disorders ranging from diabetic complications to degenerative, inflammatory, and vascular pathologies. This reflects the complex and multisystemic nature of retinal disease.
2. Diabetic Retinopathy – The Dominant Burden Diabetic retinopathy (DR) was the most frequently diagnosed retinal condition, representing 31% of cases. This highlights the growing public health burden of diabetes and the need for systemic screening and early ophthalmic referral.
3. High Prevalence of Vascular and Degenerative Conditions Retinal vein occlusion and age-related

macular degeneration (AMD) were the next most common diseases. Both are primarily linked to aging and systemic vascular risk factors, indicating the importance of multidisciplinary care.

4. Working-age Population Significantly Affected A significant number of patients fell within the 40–60 age group, demonstrating that retinal diseases are not confined to the elderly and often affect individuals in their most productive years.
5. Gender Distribution Nearly Equal The study found a nearly equal distribution between male and female patients, suggesting no significant gender predisposition in the general retinal disease profile.
6. Importance of Advanced Diagnostics in Tertiary Settings Use of high-resolution imaging like OCT, fluorescein angiography, and B-scan ultrasonography played a vital role in diagnosis, staging, and treatment planning, justifying the need for specialized retina clinics in tertiary centers.
7. Variety of Interventions Required The management approach varied from conservative observation to laser photocoagulation, intravitreal injections, and complex vitreoretinal surgeries, depending on the disease stage and type.8. Need for Early Detection and Referral Several cases presented late, with irreversible damage. This emphasizes the importance of timely referral from primary and secondary healthcare levels and the role of awareness programs.
8. Role of Tertiary Care in Complex Case Management Inherited retinal dystrophies, ROP, retinal detachments, and posterior uveitis were managed with a team-based approach involving pediatricians, neonatologists, and internists, underscoring the integrative role of tertiary centers.
9. Age-related Patterns Provide Epidemiological Insight Retinal degenerations such as AMD were mostly confined to the >60 age group, while DR and RVO were more spread across 40–60 years, offering valuable clues for preventive strategies.
10. Potential of Screening Programs and AI The study supports the urgent need for population-based screening programs for diabetes and AMD, where artificial intelligence and tele-ophthalmology can play transformative roles.
11. Public Health and Policy Implications Findings from this study can help shape eye health policies, especially in integrating retinal care into NCD (non-communicable disease) management programs and establishing referral protocols.
12. Limitations Acknowledged The data reflects only patients who presented to the retina clinic, potentially underrepresenting asymptomatic or early-stage disease. Additionally, rare conditions may be missed in short study durations.
13. Future Scope The study paves the way for future longitudinal research tracking treatment outcomes, genetic counseling for inherited conditions, and the development of AI-assisted diagnostic tools in the Indian context.
14. Conclusion Statement Overall, this study emphasizes the burden and diversity of retinal diseases in a tertiary care setting, reinforcing the need for early detection, interdisciplinary management, patient education, and healthcare system strengthening for retinal care delivery.

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