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Retinal diseases and treatment modalities

Abstract:

Retinal diseases encompass a broad spectrum of conditions affecting the delicate neural tissue lining the back of the eye, leading to vision impairment and blindness if left untreated. With the aging global population, the prevalence of retinal diseases such as age-related macular degeneration (AMD), diabetic retinopathy, and retinal vein occlusion is on the rise, posing significant public health challenges.

Recent advancements in diagnostic tools, including optical coherence tomography (OCT) and fundus fluorescein angiography (FFA), have revolutionized our understanding of retinal diseases, allowing for early detection and precise monitoring of disease progression. These technological breakthroughs have been instrumental in facilitating targeted and personalized treatment approaches.

Treatment modalities for retinal diseases have also seen remarkable progress over the past decade. Anti-vascular endothelial growth factor (anti-VEGF) therapies have become the cornerstone in the management of neovascular AMD and diabetic macular edema, demonstrating significant improvements in visual outcomes and quality of life for patients.

Additionally, innovations in retinal laser therapy, intravitreal injections, and surgical interventions such as vitrectomy and retinal detachment repair have expanded the therapeutic arsenal available to ophthalmologists, offering new hope to patients with previously untreatable conditions.

Despite these advancements, challenges remain in optimizing treatment regimens, minimizing side effects, and ensuring equitable access to care. Ongoing research efforts are focused on developing novel therapeutic agents, refining drug delivery systems, and exploring the potential of gene therapy and regenerative medicine approaches to further enhance treatment outcomes.

This abstract aims to provide an overview of the current landscape of retinal diseases, highlighting the latest advancements in treatment modalities and outlining future directions in research and clinical practice. By fostering collaboration between researchers, clinicians, and industry stakeholders, we can continue to drive innovation and improve the lives of patients affected by retinal diseases worldwide.

Biography

Tehreem Najam is affiliated with the University of Gujrat, Pakistan