

EDITORIAL

Revolutionizing Vision : The Latest Trends and Challenges in Eye Care Management

The field of ophthalmology is rapidly evolving, driven by technological advancements and a growing understanding of eye health. As we move into 2025, several key trends and innovations are shaping the landscape of eye care management.

According to the **World Health Organization (WHO)**, approximately 2.2 billion people globally have a vision impairment or blindness. The majority of vision impairment is due to uncorrected refractive errors and cataracts. There is a significant shortage of eye care professionals, especially in low- and middle-income countries like Afghanistan, Haiti, Ethiopia and Democratic Republic of Congo. Low-income countries typically have a (Gross National Income) GNI per capita of \$1,045 or less. Lower-middle-income countries have a GNI per capita between \$1,046 and \$4,095 include, India, Kenya, Bangladesh, Nigeria.

The World Health Organization (WHO) estimates a need for 1,24,000 additional eye care workers to achieve universal eye health coverage. Only 36% of people with vision impairment globally have access to eye care services. In low-income countries, the utilization rate is even lower, at around 15%.

Innovations in ophthalmic care : Artificial Intelligence (A.I.) in Ophthalmology is revolutionizing diagnostic imaging and disease detection. A.I. algorithms can analyse large datasets, identify patterns, and make predictions, enabling clinicians to diagnose and manage eye diseases more accurately and efficiently. This technology is particularly beneficial in detecting conditions such as diabetic retinopathy and age-related macular degeneration at an early stage.

Advances in Gene therapies and personalized medicine are offering new hope for patients with inherited eye diseases. Researchers are developing targeted therapies that can address the underlying genetic causes of conditions like retinitis pigmentosa and Leber congenital amaurosis, potentially restoring vision or halting disease progression.

With the increasing prevalence of myopia, especially among children and adolescents, there is a growing focus on early detection and management. Innovative solutions such as orthokeratology lenses and atropine eye drops are being explored to slow the progression of myopia and reduce the risk of associated complications.

Preventive care and public health initiatives remains a cornerstone of effective eye care management. Public health initiatives aimed at promoting healthy vision such as regular eye screenings and awareness campaigns, are crucial in

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K. Ranga Ravi
EDITOR

EXCELLENT OUTREACH PERFORMANCE BY OUR TEAM

In February 2025, the Sankar Foundation's Outreach Team achieved a remarkable milestone by conducting a record **55 free eye screening camps** in the rural, interior, and tribal areas of the north coastal districts of Andhra Pradesh. This ambitious initiative is a testament to the team's dedication and commitment, marking a significant step toward addressing avoidable blindness in these underserved regions. Sri A. Krishna Kumar, Managing Trustee and Sri A. Radhakrishnan, G.M. commended the entire outreach team for this notable performance.

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Sankar Foundation Doctors Earn Prestigious AIOS FAICO Certification



Dr Nasrin,
Director,
HOD Cornea

Sankar Foundation doctors have indeed earned prestigious recognition from the All India Ophthalmological Society (AIOS). This recognition highlights their dedication and excellence in the field of ophthalmology. It's always inspiring to see medical

professionals being acknowledged for their hard work and contributions to healthcare.

Dr. Nasrin, Director of Medical Administration & Training and Head of the Cornea Department and Dr Yashaswini, Consultant, Cornea and Dr. M. Kavitha Devi, Consultant, Glaucoma have successfully passed the theory and practical examinations, earning the prestigious FAICO (Cornea) and Glaucoma Certification respectively from the All India Ophthalmological Society (AIOS) for the year



Dr Yashaswini
Consultant -
Cornea



Dr. M. Kavitha Devi
Consultant -
Glaucoma

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GAIL Donates a Modern Ambulance to Sankar Foundation

The Sankar Foundation expresses its heartfelt gratitude to



the Gas Authority of India Ltd (GAIL) for generously donating an Advanced Life Support Ambulance to support its healthcare services. This generous contribution signifies GAIL's unwavering commitment to supporting the health and well-being of our

community. The modern ambulance, equipped with advanced medical facilities, will enhance the Sankar Foundation's capacity to provide timely and effective healthcare services to those in need. GAIL has consistently demonstrated its dedication to corporate social responsibility, and this donation is yet another testament to their ongoing support and partnership with Sankar Foundation. We are grateful for their continued collaboration and investment

in our mission to deliver exceptional healthcare services. This partnership strengthens our resolve to serve the community with even greater dedication and compassion.



Together, we look forward to a future where every individual has access to the medical care they deserve, and we thank GAIL for playing a crucial role in making this vision a reality.

REVOLUTIONIZING VISION

reducing the burden of eye diseases. Efforts to reduce risk factors like smoking and exposure to UV light are also essential in preventing vision loss.

Telemedicine and remote monitoring accelerated the adoption of telemedicine in ophthalmology during the COVID-19 pandemic. Remote monitoring and virtual consultations are becoming more common, allowing patients to receive timely care without the need for in-person visits. This approach is particularly beneficial for patients in rural or underserved areas.

Challenges and solutions: Despite these advancements, challenges remain. Access to care, particularly in low-income communities, continues to be a significant barrier. Addressing these disparities requires a multifaceted approach, including policy changes, increased funding for eye care programs, and community outreach efforts.

The main challenges include shortage of eye care human resources, lack of educational skills, paucity of funds, limited access to instrumentation and treatment modalities, poor outreach, lack of transportation, and fear of surgery represent the major barriers to its large-scale diffusion.

A large and rapidly-ageing population: With a growing elderly population, there is an increased prevalence of age-related eye conditions such as cataracts, glaucoma, and macular degeneration. The healthcare system must adapt to meet the rising demand for eye care services for this demographic.

A wider disease spectrum: Eye care must address a broad range of conditions, from common refractive errors and infections to more complex diseases like diabetic retinopathy and retinal disorders. This diversity requires

comprehensive diagnostic and treatment capabilities.

Skewed distribution of resources: There is often a disparity in the availability of eye care services and professionals between urban and rural areas. Rural regions may face shortages of ophthalmologists and access to advanced medical facilities, leading to underserved populations.

Ophthalmic education: Ensuring that eye care professionals receive adequate training and continuing education is crucial. Advancements in technology and treatment methods require ongoing education to maintain high standards of care.

Allocation and Integration of resources: Efficient use and integration of available resources, such as funding, equipment, and personnel, are necessary to optimize eye care delivery. This involves strategic planning and coordination among various healthcare providers and institutions.

Eye health literacy: Raising public awareness about eye health, the importance of regular eye check-ups, and early detection of eye diseases is essential. Improved health literacy can lead to better patient outcomes and proactive management of eye conditions.

These trends, data and the challenges highlight the need for a multifaceted approach to enhance eye care management and address the diverse needs of the population.

In conclusion, the future of eye care is promising, with innovations in technology and a growing emphasis on preventive care paving the way for improved patient outcomes. By staying informed and embracing these trends, we can ensure that everyone has access to the best possible eye care.

Outreach Performance

Through these camps, the foundation's team of skilled ophthalmologists, technicians from Optical and Pharmacy, and dedicated volunteers provided vital eye care services, including screenings, consultations, and treatments, to thousands of individuals who might have otherwise had limited access to such healthcare. The initiative not only improved the vision health of many but also raised awareness about the importance of early detection and regular eye check-ups, ensuring a brighter future for the rural and tribal communities. The Sankar Foundation's commitment to accessible and affordable eye care continues to significantly impact the lives of people in rural and tribal areas.



The Outreach Team, led by Sri N. Appalaraju (Senior Manager), Sri Arunkumar (Manager), Sri Ch. Venkataramana, Sri M. Saikumar, S. Joga Rao, Sri Ch. Aswini Kumar, and others, actively participated in the free eye camps. Through these eye camps, a



total of **3501 people were screened** and conducted eye surgeries totally free of cost to the patients. The patients who were selected for surgeries brought to the main hospital at Visakhapatnam and after successful surgeries they were brought back to their destinations by the hospital's transport facility.

Managing Stress to Protect Your Eyes: Simple Measures for Optimal Eye Health

As stress levels continue to rise in recent years, it is important for eye care professionals to understand the potential health effects of chronic stress to better diagnose and treat our patients and to ensure we are keeping ourselves healthy as well. Stress can have a significant impact on eye health, leading to various vision problems. When we experience stress, our body releases hormones like cortisol and adrenaline, which prepare us for the "fight or flight" response. While this response is helpful in short bursts, chronic stress can cause several eye-related issues:



Eye-Related Problems Caused by Stress

Dry Eyes: Stress can reduce tear production, leading to dry, itchy, or uncomfortable eyes.

Eye Twitching: Known as myokymia, stress-induced eye twitching is a common reaction that can be exacerbated by caffeine and lack of sleep.

Blurry Vision: High stress levels can affect blood pressure and other vascular problems, leading to blurry vision.

Eye Strain: Prolonged stress can cause eye strain, especially if combined with extended screen time.

Sensitivity to Light: Stress can make bright lights more painful and harder to see.

Elevated Eye Pressure: Chronic stress can increase intraocular pressure, potentially leading to glaucoma.

Remedial Measures

Regular Breaks: Follow the 20-20-20 rule: every 20 minutes, look at something 20 feet away for at least 20 seconds to reduce eye strain.

Adequate Hydration: Drink plenty of water to prevent dry eyes caused by stress.

Balanced Diet: Consume foods rich in omega-3 fatty acids, lutein, zinc, and vitamins C and E to support eye health.

Mindfulness and Relaxation: Incorporate practices like meditation, yoga, or deep breathing exercises to manage stress levels and reduce its impact on your eyes.

Professional Help: If stress-related eye issues persist, consult an eye care professional for tailored advice and treatments.

By managing stress effectively, you can protect your eye health and maintain clear vision. Remember, taking care of your overall well-being is essential for maintaining good eye health.

(Inputs: **K Bangar Raju**, Dy General Manager (PR & Liaison) and Sourced from American Academy of Ophthalmology).

Performance at a Glance

Total Eye Surgeries 4,71,458 Since Inception
Total OP Screened 27,43,511 Since Inception

DO YOU KNOW?

AMAZING FACTS ABOUT EYES

WHAT IS THE RAREST EYE COLOR?

Green Eyes : Eye color is determined by a person's genetics, although sometimes eye color can change due to medication side effects or certain eye conditions. Gray eyes and green eyes are considered to be the rarest eye colors. Your eye color is determined by multiple combinations of genes that produce and distribute pigments.



The World's Most Common Eye Color Is Brown

It's estimated 70-79% of people have brown eyes, while 8-10% have blue eyes, and only about 2% have green.

8 Interesting Facts About the Human Eye

- ◆ The Eye Works Like a Camera Lens.
- ◆ The Eye Can Move in Many Directions.
- ◆ Eyes Can See Three Miles Away or More.
- ◆ Eyes Are Not the Same Size from Birth to Death.
- ◆ Eyes Can See Up to 60 Frames per Second.
- ◆ An Adult Eyeball Weighs Less than One Ounce.
- ◆ Blinking Protects Eyes from Dirt and Debris.

Eyes Host the Fastest Muscle in Your Body

There are six extraocular muscles attached to each eye, allowing you to look side to side. Responsible for various involuntary motions, they allow movements called saccades that last 50 to 60 milliseconds each.

Eyes Are Complex

As the second most complex organs after the brain, eyeballs have over two million working parts, and more than one million nerve fibres connect each one to the brain.



Eye Colour has Little or No Influence on Vision

It has been suggested that blue and green eyes are more sensitive to light than brown eyes, and that brown eyes are more susceptible to cataracts. Some studies even claim that people with brown eyes are better at responsive actions such as racquet sports, while people with lighter coloured eyes may be better at strategic thinking.

- ◆ Better understanding the complex nature of our eyes can help us appreciate how lucky we are to have them and how important vision is to the evolution of our species.
- ◆ Understanding our eyes can also help us appreciate how fragile they are so we might better protect them from injury and deterioration.



- ◆ To make sure we keep our eyes healthy and safe from harm we must limit their exposure to light, heat and particles such as dust, by protecting them with quality glasses we can enjoy all the benefits of vision but without the risk.

Inputs: **K Bangar Raju**,
Dy General Manager (PR & Liaison): (Source: Bolley Safety)

Free Eye Screening Camps for school children organized



Dr. Shakti Saravaran examining the students assisted by technicians.



Sankar Foundation in association with **Barzilai Foundation**, conducted eye screening camps for government school children at Kasimkota in Anakapalle district on 7th and 10th February, 2025. A total of 496 children were screened, and medicine was distributed. Glasses were prescribed for 38 students, and 54 students were referred for further treatment.

Dr. Shakti Saravaran and Dr. Geetanjali, assisted by optometrists, pharmacy, and optical shop technicians, examined the students. The Outreach department organized the free eye screening camps.

Dr Sirisha distributes Certificates at Bhashyam School

Dr Sirisha, HOD Orbit & Oculoplasty was the Chief Guest on behalf of Sankar Foundation at the Graduation Day of Bhashyam Little Champs School, Ravinagar, Visakhapatnam held on 9th February, 2025. She presented certificates to the school children. Speaking on the occasion, Dr Sirisha said today marks a significant milestone in your journey of learning and growth and advised them to Keep learning, keep exploring, and always be kind and curious.



Dr M Subrahmanyam joins Sankar Foundation

Dr M Subrahmanyam, a renowned and prominent Ophthalmologist, specialised in Orbit and oculoplasty services, joined Sankar Foundation family as a Senior Consultant in February, 2025. Dr Subrahmanyam's services are available on the **last Friday & Saturday of every month**. He served as a Director, Medical Education from 2010 to 2012 at Sankar Foundation Eye Hospital, Visakhapatnam.

Dr. Subrahmanyam is a Zeigler International Fellow, and a Fellow at both the University of British Columbia and the University of Wisconsin. Dr Subrahmanyam, MBBS & MS, Professor of Ophthalmology for 20 years and served as a Past President, Oculoplastic Association of India, Andhra Pradesh Ophthalmic Society, Professor Emeritus, NTR University of Health Sciences.

He started the department of Ophthalmic Plastics and Orbital Services and served as Superintendent of Sarojini Devi Eye Hospital, Regional Institute of Ophthalmology, Hyderabad. He served as an Academic Director of Maharaja Institute of Medical Sciences, Nellimarla. He authored a text book "Surgical Atlas of Orbital Diseases" and presented 200 papers and delivered 100 guest lectures.

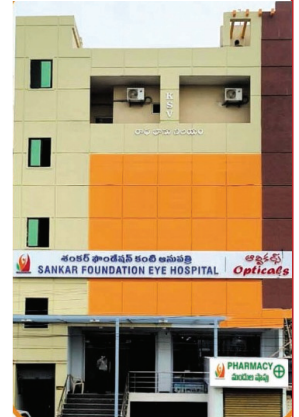


NABH Assessment Team inspects Gajuwaka Branch of Sankar Foundation

An Assessment Team of National Accreditation Board for Hospitals & Healthcare Providers (NABH), a Constituent Board of Quality Council of India inspected Sankar Foundation Hospital at Gajuwaka on 22nd February, 2025 for NABH Accreditation to the hospital.

The team thoroughly assessed all the clinical and non-clinical areas and interacted with doctors and employees for compliance of NABH

standards of the eye care organization. NABH primarily focuses on patient safety and quality of healthcare. Sri K.V. Venu gopal, DGM (Operations), Dr Mamata Mayee Panigrahi, doctors and the employees took part in the assessment process.



SANKAR FOUNDATION LAB TOPS QUALITY DIAGNOSTIC SERVICES

Sankar Foundation's laboratory has been ranked **Grade One** in the yearly summary report of 2024, a testament to our dedication to maintaining the highest standards of quality and accuracy in our diagnostic tests.

The ranking was bestowed on SF by the External Quality Assurance Scheme (EQAS) of the Department of Clinical Biochemistry at **Christian Medical College (CMC) Vellore**. Renowned for its rigorous evaluation process, EQAS ensures that participating laboratories adhere to the best practices in clinical biochemistry.

The laboratory, headed by Dr. M. Gopalakrishna Reddy, a Pathologist, is assisted by Sri S. Venkar Rao, Smt. Sridevi, Assistant Managers, and technicians. This state-of-the-art laboratory is equipped with a Semi-



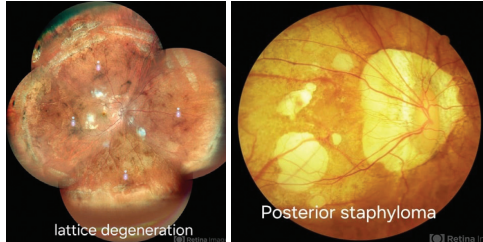
The dedicated and patient-friendly team at the Sankar Foundation Laboratory.

Automated Biochemistry Analyser, Hematology Analyser, and facilities for serology tests, among other advanced equipment.

Sankar Foundation has been achieving this recognition continuously since 2019, for its quality diagnostic services.

Innovative Approaches to Myopia Management : Tackling the Global Epidemic

Myopia, also known as near-sightedness, is a common eye condition where distant objects appear blurry while close objects can be seen clearly. This occurs because the eye's optical power is too strong, causing light rays to focus in front of the retina instead of directly on it.



In the retina, myopia can lead to complications such as retinal detachment, macular degeneration, cataracts, and glaucoma, especially in cases of high myopia. The elongation of the eyeball or an overly curved cornea are common causes of myopia.

The term "myopia" is derived from the Greek word "muopia," meaning "to close the eyes." Myopia is one of the leading causes of poor vision worldwide and is frequently observed in outpatient settings in our country. It is also a significant cause of ocular morbidity, particularly in younger generations like school-going children and young adults.

Uncorrected myopia can have substantial social, psychological, economic, and developmental implications. Additionally, due to the degenerative changes in the retina and the optic disc, the irreversible vision-threatening consequences seem inevitable.

Etiology : Children predisposed to myopia typically have a large axial length at birth, which disrupts the emmetropization process, leading to rapid progression of myopia during childhood.

Pathophysiology : Classifying myopia is essential for its appropriate management. The classifications include:

- * Axial myopia
- * Meridional myopia
- * Regular myopic astigmatism
- * Oblique astigmatism
- * Lenticular myopia



Severity :

Myopia severity is categorized as follows:

- * Mild: between ± 0.5 and ± 4 D
- * Moderate: between ± 4 and ± 8 D
- * Severe: $> \pm 8$ D
- * Symptoms
- * The most common symptom of myopia is decreased distance vision. Patients with pathological myopia may present with symptoms such as scotomas, metamorphopsia, and floaters.
- * Diagnostic Procedures
- * Myopia can be detected in children through various vision screening procedures. Significant refractive error is suspected when visual acuity is reduced during a routine eye exam or vision screening. Cycloplegic refraction, auto-refraction, and dilated fundus examination are essential parts of diagnosing myopia.
- * Posterior Segment Findings in Myopia
- * Posterior-segment lesions can be classified as central or peripheral retinal lesions. The primary goal of identifying these lesions is to prevent sudden loss of vision following retinal detachment. In patients with myopia, the retina stretches posteriorly due to an increase in axial length, eventually causing peripheral retinal degeneration and thinning.

* Pathologic myopia is generally classified as a high myopic refractive error (> 6 diopters) or an axial length > 26.5 mm. Patients with high axial myopia are at a greater risk of developing progressive retinal degeneration and other vision-threatening pathologies.

* Several vitreoretinal disorders, including vitreous degeneration, posterior vitreous detachment, peripapillary atrophy, lattice

Dr. T. Krishna
HOD
Retina Dept



degeneration, tilted disc, retinal pigment epithelium (RPE) atrophy, posterior staphyloma, lacquer cracks, and Fuch's spot, can be seen in pathological myopia.

Peripheral degenerations : Lattice degeneration, pavement degeneration, and white-without-pressure are the most common peripheral retinal degenerations associated with pathological myopia needs routine follow ups and observation.

Tears and holes in the peripheral retina are critical components of the clinical workup of patients with myopia and should be observed periodically and barrage laser should be done. A horseshoe tear and percolated holes should be barraged using retinal lasers to prevent future chances of retinal detachment. Atrophic holes can be periodically observed during the development of subclinical retinal detachment. High myopia is known to be a risk factor for rhegmatogenous retinal detachment (RRD) and half of the patients with RRD are estimated to be myopia patients



Anatomical and functional abnormalities are observed in patients with pathological myopia. Posterior staphyloma, choroidal neovascular membrane (CNVM), and foveal retinoschisis are the three critical lesions observed in patients with myopia > 10 D.

Staphyloma: Staphyloma is an outpouching of the wall of the eye. Posterior staphyloma is unique to pathological myopia.

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BOTULINUM TOXIN INJECTION: REVOLUTIONIZING NON-SURGICAL OCULOPLASTIC PROCEDURES

Since its introduction in the 1980s, botulinum toxin injections have become a significant non-surgical technique to treat various ophthalmological conditions like oculoplastic surgery due to their ability to treat various conditions and enhance facial aesthetics.

The mechanism of action of botulinum toxin is neuromuscular blockade, resulting in transient muscle paralysis. Botox has become a powerful tool in ophthalmology due to its ease of application, especially where surgery is

not feasible. However, the need for repeated injections and high cost are major limiting factors in its usage.

Here are some key points about their use in oculoplasty:

Therapeutic Applications:

Botulinum toxin is used to treat conditions such as strabismus, blepharospasm, hemifacial spasm, and spastic entropion. It works by inhibiting acetylcholine release at the neuromuscular junction, resulting in muscle paralysis.

Cosmetic Applications: In oculoplastics, botulinum toxin is commonly used for reducing forehead and glabellar wrinkles,



Dr. N.J. Sirisha
HOD, Orbit & Oculoplasty



Dr. Madhulika
Fello-Orbit & Oculoplasty

les, periocular wrinkles, and for eyebrow repositioning. It helps in facial rejuvenation by relaxing the muscles responsible for dynamic wrinkles.

Mechanism of Action:

The toxin binds irreversibly to presynaptic cholinergic receptors, blocking the release of acetylcholine vesicles and causing muscle paralysis.

History:

The first clinical application of botulinum toxin in ophthalmology was pioneered by Dr. Alan Scott in the 1970s to treat strabismus. Since then, its therapeutic applications have expanded significantly.

Safety and Efficacy:

Botulinum toxin treatments in ophthalmology are FDA-approved and have a favorable safety profile.



MYOPIA MANAGEMENT

Lacquer cracks: Lacquer cracks are irregular yellow linear lesions in the macula.

Myopic choroidal neovascularization: Myopic CNV usually appears as small circular and grayish colour and settles near the macula or optic disc. Myopic CNVMs showing any form of progression may require anti-vascular endothelial growth factor therapy.

Fuchs spots: Fuchs spots are pigmented gray scars corresponding to regressed myopic CNV sites.

Myopic tractional maculopathy: Myopic tractional maculopathy results from vitreoretinal traction and its manifestations include retinoschisis, foveal retinal detachment, and lamellar or full-thickness macular hole.

Management of Myopia: Early detection and treatment of possible ocular complications associated with high myopia are crucial to reducing morbidity. Therefore, patients should be informed in detail about complications associated with high myopia. Importance of periodic follow-up is essential for both the early diagnosis and treatment of possible asymptomatic ocular findings

Spectacles: Spectacles with periodic refraction under appropriate cycloplegic agent is advocated.

Orthokeratology: Orthokeratology means the reduction or modification or elimination of refractive error with the help of programmed contact lens application

Role of Atropine in Controlling the Progression of Myopia

Atropine eye drops are another mode of therapy for myopia progression. The initial atropine study (ATOM 1) showed the effectiveness of atropine 1% eye drops for myopia progression mitigation, and subsequently, the ATOM 2 study demonstrated comparable efficacy with lower concentrations of atropine, 0.5% 0.1% and 0.01%.

Refractive Surgery: Besides, contact lenses, refractive surgeries are the other popular and significant modes of visual rehabilitation in myopic eyes.

Future Direction : Myopia is an emerging major public health problem globally as well as in India. It needs to be tackled in time with adequate preventive and curative measures, to minimize its impact in every aspect of life.

Sankar Foundation Doctors Earn

2024-25. Their training and experience in the subspecialty are now recognized by the peers at the All India Collegium of Ophthalmology, part of AIOS, the largest professional organization of ophthalmologists in the world. **"This is a remarkable achievement, and we are truly delighted to welcome you to the Collegium,"** stated Dr. Lalit Verma, Chairman of the AIOS FAICO Board, in a communication sent to Dr. Nasrin, Dr. Yashaswini and Dr. Kavitha Devi. The AIOS FAICO Convocation and Awards Ceremony will be held during the combined APAO and Annual Conference of the All India Ophthalmological Society (APAO-AIOS 2025) in New Delhi on April 4, 2025.

Sri A. Krishna Kumar, Managing Trustee, Sri K. Radhakrishnan, GM, doctors and employees of Sankar Foundation congratulates Dr. Nasrin, Dr. Yashaswini and Dr. Kavitha Devi for their remarkable achievement in the field of Cornea, Glaucoma.

Understanding Corneal Ulcers : Causes, Symptoms and Treatment Options

Corneal ulcers are open sores on the cornea, the transparent layer and dome-shaped surface at the front of the eye. This condition can result from a variety of factors, including trauma, infections, genetic disorders, or conditions like keratoconus. It leads to blurred vision, sensitivity to light, and in severe cases, total vision loss. Treatment options include corneal transplants (keratoplasty), medication, and in some cases, corrective lenses. Prompt medical attention is crucial to prevent complications like vision loss. Treatment often involves antibiotic or antifungal eye drops, and in severe cases, surgery might be needed.

Most common cause of corneal blindness in rural and agricultural backgrounds is CORNEAL ULCERS.

Understanding Corneal Ulcers: Prevention and Care

Our eyes are one of our most vital senses, and protecting them from harm should be a top priority. One of the most serious conditions that can affect our vision is a corneal ulcer. In this article, we delve into what corneal ulcers are, the different types, their causes, and most importantly, how you can prevent them to maintain eye health and avoid potential vision loss.

What Are Corneal Ulcers?

A corneal ulcer is an infective lesion that forms on the cornea. The cornea plays a crucial role in focusing light and protecting the inner parts of the eye. Corneal ulcers cause pain, vision impairment, and in severe cases, permanent blindness.

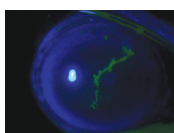
Corneal ulcers are usually caused by infections, but they can also result from trauma or pre-existing eye conditions. Left untreated, these ulcers can deepen, scar the cornea, and possibly cause vision loss.

Types of Corneal Ulcers

Corneal ulcers can be classified based on the type of infection or injury that causes them. Here are the main types:

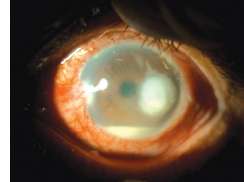
1. Viral Corneal Ulcers

Viral infections, particularly those caused by the herpes simplex



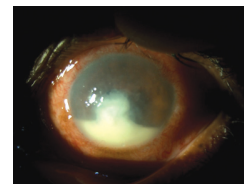
virus (HSV), can lead to viral corneal ulcers. HSV can remain dormant in the body and reactivate under certain conditions, such as stress or a weakened immune system. The ulcers may be recurrent, making the condition difficult to manage.

2. Bacterial Corneal Ulcers : These are the most common type and are usually caused by bacteria such as Pseudomonas or Staphylococcus.



Bacterial infections often occur when the eye is exposed to contaminated water, contact lenses, or other environmental factors. People who wear contact lenses, especially overnight or without proper hygiene, are at increased risk.

3. Fungal Corneal Ulcers : Fungal infections, often caused by fungi such as Aspergillus or Fusarium, can result in corneal ulcers. These typically develop after eye trauma, particularly from exposure to vegetative materials like plant debris or soil, most commonly during farming.



4. Amoebic Corneal Ulcers : Amoebic infections, caused by the Acanthamoeba parasite, are most commonly seen in people who wear contact lenses but fail to follow proper hygiene practices. The infection can be difficult to treat and often requires prolonged care.

Symptoms of Corneal Ulcers

Corneal ulcers can cause a range of symptoms, which may include:

- ◆ Eye redness
- ◆ Severe pain or a feeling of grittiness
- ◆ Blurry or reduced vision
- ◆ Sensitivity to light
- ◆ Tearing or discharge
- ◆ Swollen eyelids
- ◆ A white or gray spot on the cornea (visible on examination)

If you experience any of these symptoms, it's crucial to seek medical attention immediately. Early diagnosis and treatment are essential to prevent permanent damage.

Risk Factors for Corneal Ulcers

While anyone can develop a corneal ulcer, certain factors increase the risk:

◆ Contact Lens

Use: Wearing contact lenses, especially

extended wear lenses, or improper cleaning of lenses can introduce bacteria, viruses, or fungi into the eye.

◆ **Eye Trauma:** Injury or foreign objects in the eye can lead to an ulcer. This is particularly a concern in activities like gardening, farming, or playing sports without proper eye protection, especially in rural areas.

◆ **Dry Eye Syndrome:** Insufficient tear production can lead to dryness and increase susceptibility to infection.

◆ Pre-existing Eye Conditions:

People with conditions like blepharitis (eyelid inflammation) or keratitis (inflammation of the cornea) are at greater risk.

Prevention: How to Protect Your Eyes

The good news is that many corneal ulcers can be prevented through simple yet effective steps. Here are some tips to keep your eyes healthy and reduce the risk of corneal ulcers:

1. Proper Contact Lens Care:

- ✱ Always wash your hands before handling lenses.
- ✱ Clean and disinfect lenses as instructed by your eye care professional.
- ✱ Never sleep in your contact lenses unless they are specifically designed for extended wear.
- ✱ Replace lenses and cases regularly to avoid bacterial build-up.

2. Avoid Eye Trauma:

- ✱ Wear protective eyewear when engaging in activities like sports, woodworking, farming, or gardening to protect your eyes from injury.
- ✱ Avoid touching your eyes with dirty hands or exposing them to foreign substances.



Dr. Sree Vinya
Fellow, Cornea

Performance - February 2025

BASE HOSPITAL

♦ Total Eye Surgeries	2932
♦ Cataract Surgeries	2163
♦ Retina Surgeries	77
♦ Retina Injections	190
♦ Glaucoma Surgeries	25
♦ Cornea Surgeries	186
♦ Pediatric Surgeries	03
♦ Orbit & Oculoplasty	61
♦ Total OP Screened	15,365

BRANCHES

♦ Srikakulam -Eye Surgeries	381
♦ OP Screened	1422
♦ Maddilapalem -Surgeries	128
♦ OP Screened	1286
♦ Gajuwaka -Surgeries	23
♦ OP Screened	1145
♦ Madhurawada -Surgeries	13
♦ OP Screened	636
♦ Total 55 Outreach free eye camps conducted and screened 3501 patients and Performed 1261 surgeries	

EDITOR

K BANGAR RAJU,
Dy GM (PR & Liaison)



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DR. NASRIN AWARDED MBA IN HOSPITAL ADMINISTRATION



Dr. Nasrin, Director of Medical Administration & Training and Head of the Cornea Department, has achieved another milestone in her career by being awarded an **MBA in Hospital Administration** from Andhra University. Dr. Nasrin passed the examination held in July 2024 in **First Class with Distinction**.

With an illustrious career spanning over 22 years at Sankar Foundation, Dr. Nasrin has earned a high reputation in the Cornea department. She holds a DNB in Ophthalmology, has

completed a Long Term Fellowship in Cornea from Sankar Foundation, short-term training in Cornea at Aravind Eye Hospital in Madurai, and LASIK training at Dr. Shroff Eye Centre in New Delhi.

The Board of Trustees, headed by Sri M. Ramdas, Sri Krishna Kumar Atmakuri (Managing Trustee), Sri K. Radhakrishnan (GM), along with doctors and staff, congratulated Dr. Nasrin on her academic achievement.

UNDERSTANDING CORNEAL ULCERS

3. Maintain Good Hygiene:

- ✳ Never share makeup, eye drops, or towels to prevent the spread of infection.
- ✳ Keep your eyes moist and healthy by using artificial tears if you suffer from dry eye syndrome.

4. Seek Prompt Medical Attention: If you suspect that you have a corneal ulcer, don't delay in seeing an eye doctor. Early intervention is critical to prevent complications and preserve vision. In many cases, antibiotics, antifungal medications, or antiviral treatments can clear up the infection before it causes lasting damage.

Treatment for Corneal Ulcers

Treatment for corneal ulcers depends on the underlying cause of the infection:

- ✳ **Viral Ulcers:** Antiviral medications, usually in the form of eye ointment and oral medications, are used to control the infection.
- ✳ **Bacterial Ulcers:** These are treated with antibiotic eye drops or ointments.
- ✳ **Fungal Ulcers:** Antifungal eye drops or oral medications may be required.
- ✳ **Amoebic Ulcers:** Treatment often includes a combination of antibiotics and anti-amoebic medications, which can take several months to resolve.

In severe cases, surgery such as a corneal transplant in the form of

therapeutic keratoplasties or tectonic grafts may be necessary to preserve the anatomical

and structural integrity of the eyeball and later restore vision if possible, when the cornea is severely damaged.

Conclusion: Protect Your Eyes

Corneal ulcers are a serious condition that can threaten your vision, but with the right preventive measures, you can significantly reduce your risk. By practicing proper eye care, maintaining good hygiene, and seeking prompt medical attention at the first signs of infection, you can protect your eyes from potential harm and preserve your sight for years to come.

By raising awareness of these preventative measures, we can help reduce the risk of corneal ulcers and the associated risk of blindness. Thank you for taking the time to read about corneal ulcers. We hope this information empowers you to take better care of your eye health and spread awareness to your friends and family.

**Stay safe and
keep your eyes healthy!**

