SANKAR FOUNDATION EYE HOSPITAL
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# VISIONARY INSIGHTS

Volume 1 : Issue 10 : April 2025 Monthly In-house Newsletter of Sankar Foundation

## EDITORIAL The Vision of a Nation: Addressing Ophthalmology Challenges in India

India, a country of over 1.45 billion people, 70% of whom live in rural areas, faces a significant burden of visual impairment and blindness. Despite advancements in medical science, the prevalence of avoidable blindness remains a pressing concern. According to the **National Blindness and Visual Impairment Survey,** the prevalence of blindness in India is 0.36% across all age groups, with a staggering 1.99% among individuals aged 50 years and above. These numbers highlight the urgent need for a robust and inclusive approach to tackle ophthalmological challenges in the country.

More than 10 million Indians are blind. According to the budget estimates for 2025-26, the Union government has allocated INR 95,958 crore to the healthcare sector for FY26 (Fiscal Year), a 11% percent increase over the FY25 budget estimates (Rs 86,582 crores). While this figure signals a continued investment in this sector, it does little to address the long-standing resource gap in public health infrastructure.

The challenge of providing quality eye care under these circumstances is daunting, to say the least. However, Indian Ophthalmology has risen to this challenge admirably and today **ophthalmic care in India is among the best in the world.**

**According to the available data, the average ophthalmologist-to-population ratio in developed countries is around 39 ophthalmologists per million population.** India with an estimated 25,000 ophthalmologists has just around 15 per million population with a significant disparity between urban and rural areas where access to eye care is much lower in rural regions. The most common cause of blindness in India is cataracts, followed by corneal opacity and glaucoma. Globally, retinal disorders account for 6% of blindness.

One of the primary causes of blindness in India is **cataracts,** accounting for nearly 66.2% of cases among the elderly. While cataract surgeries have become more accessible, barriers such as lack of awareness, affordability, and inadequate healthcare infrastructure in rural areas continue to hinder progress. The **National Programme for Control of Blindness and Visual Impairment (NPCB&VI)** has been instrumental in addressing these issues, but there is still a long way to go.

Another critical area is **diabetic retinopathy,** a growing concern due to the rising prevalence of diabetes in India. Studies indicate that nearly 18% of individuals with diabetes in India suffer from some form of diabetic retinopathy. Early detection and timely intervention are crucial to prevent vision loss, yet awareness about this condition remains low.

**Corneal blindness** is another significant challenge, with an estimated 1.2 million people affected in India. The scarcity of donor corneas exacerbates the problem, emphasizing the need for increased awareness and participation in eye

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K. Ranger Ritu
EDITOR

## Restoring Sight: Sankar Foundation Saves 8-Month-Old Baby's Vision

Successful Surgery

Sankar Foundation is proud to celebrate another remarkable milestone in its mission to provide world-class eye care. An eight-month-old tribal baby girl has regained her vision following a successful eye surgery for glaucoma, performed by a team of Glaucoma doctors led by Dr. T. Raveendra, Director, CQI & Research & HOD, Glaucoma Department. This delicate and complex procedure brought a new light to the baby's life, preventing irreversible blindness.

The journey began in Battivalasa village, nestled in the Araku Valley of the ASR district, where Sankar Foundation conducted a free eye camp as an outreach initiative. The baby's parents Siriki Ranjit Kumar noticed persistent watering in her right eye and sought assistance from the Foundation's team during the camp. Dr. Samruddhi Deshmukh conducted a thorough examination and referred the baby to the main hospital in Visakhapatnam for specialized care.

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## INOX Air Products Donates ALCON Constellation® Vision System to Sankar Foundation

INOX Air Products, a leading manufacturer of industrial and medical gases in India, has generously donated the ALCON Constellation® Vision System—the gold standard in vitreoretinal innovation—to Sankar Foundation as part of their corporate social responsibility (CSR) initiative with a financial support of Rs 50 lakhs out of a total cost of Rs 87 lakhs.

The new facility was inaugurated on 23rd April by Sri SVS Raju, Regional Sales Manager, INOX, Visakhapatnam in the presence of Sri K Radhakrishnan, GM, Dr T Krishna, HOD Retina Department, Sri V Ramesh Kumar, DGM (Corporate Relations) and other officials of Sankar Foundation. Sri A. Krishna Kumar, Managing Trustee of Sankar Foundation, commended INOX for their continuous support in enhancing the foundation's medical and surgical

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## INOX Air Products Donates ALCON Constellation® Vision System to Sankar Foundation

equipment, reinforcing their shared commitment to quality healthcare.

The Hypersonic vitrectomy featured in this advanced system sets a new benchmark in ophthalmic surgery. Unlike traditional vitrectomy systems, it utilizes ultrasonic power to actuate the vitrectomy probe, enabling enhanced precision and efficiency.

ALCON continues to drive excellence in ophthalmic care with the Constellation® Vision System, recognized for its superior fluidics management and ultra-high-speed cutting, ensuring exceptional surgical accuracy. The system's integrated visualization technology provides real-time imaging and illumination, allowing for improved intraoperative decision-making. Designed to optimize workflow, it minimizes surgical time while prioritizing patient safety. With its ability to support a wide range of retinal procedures, the Constellation® Vision System empowers ophthalmic surgeons to achieve superior patient outcomes.

## Restoring Sight: Sankar Foundation Saves 8-Month-Old Baby's Vision

After a detailed evaluation at the hospital, the medical team advised surgery as the only way to address the glaucoma and prevent further deterioration of the baby's vision. A team of Glaucoma surgeons performed a successful Trabeculotomy surgery, a crucial procedure that restored the baby's sight. Following post-surgery evaluation, the doctors confirmed that the baby's vision is now fully restored.

The baby's parents expressed profound gratitude to the Sankar Foundation and its dedicated team of doctors for their life-changing efforts. "They have brought light back into our baby's life, and we are forever grateful," they shared with heartfelt emotion. This achievement underscores Sankar Foundation's unwavering commitment to delivering quality eye care, even in the most underserved and remote communities.

Sri A Krishna Kumar, Managing Trustee and Sri K Radhakrishnan, GM, Sankar Foundation congratulated the doctors for saving the baby's vision.

## Performance at a Glance

**Total Eye Surgeries 4,78,332** Since Inception
**Total OP Screened 27,79,225** Since Inception

# DO YOU KNOW?

### CAPTIVATING FACTS ABOUT CORNEA - THE WINDOW TO YOUR VISION:

**What is the latest development in eye surgery?**

The latest trend in laser eye surgery is the **blending of refractive and therapeutic approaches.** For instance, combining laser surgery with cross-linking techniques can treat keratoconus while improving vision.

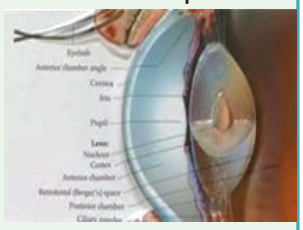
**What is the new technology for keratoconus?**

A new procedure for keratoconus, called **Bowman layer (BL) on lay grafting,** has been found to be less risky than corneal transplantation. The procedure is an epi-off transplant technique that involves adding a donor Bowman layer inside a stromal pocket.

**Which country has the best cornea transplant?**

It is possible to have an affordable corneal transplant in clinics with a high success rate. Many people prefer countries such as **Turkey, Russia, Italy, and Israel** to avoid long waiting lists and have a cornea transplant at an affordable price.

**How many years does a corneal transplant last?**



As with all types of surgery, there is a risk of complications resulting from a cornea transplant. These can include the new cornea being rejected by the body, infection and further vision problems. Most cornea transplants are successful and will work without complications for **at least 10 years.**

**What are the latest advancements in cornea transplant?**

One new -some would say radical approach involves **cultured endothelial cells (CECs).** Instead of transplanting an actual cornea, a small number of individual endothelial cells are retrieved from a young healthy donor cornea, cultivated in vitro, and then injected into the anterior chamber of the recipient eye.

**Who is the father of corneal transplant?**

**Eduard Konrad Zirm** (18 March 1863 - 15 March 1944) was an Austrian ophthalmologist who performed the first successful human full-thickness corneal transplant on 7 December 1905.

**What is the most advanced eye surgery?**

Custom LASIK is the most advanced laser technology available. Custom LASIK laser treatments are based upon the unique visual characteristics of your eye. Up until now, with glasses, contacts and conventional LASIK surgery, corrections were quite similar for each type of prescription.

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

## The Vision of a Nation: Addressing Ophthalmology Challenges in India

donation programs. Initiatives like the Hospital Cornea Retrieval Programme and **"Vision 2020: The Right to Sight"** have made strides in this direction, but community involvement is essential for sustained success.

The role of technology in revolutionizing ophthalmology cannot be overstated. From telemedicine platforms enabling remote consultations to advanced surgical techniques like phacoemulsification, technology has the potential to bridge the gap between urban and rural healthcare. However, equitable access to these advancements remains a challenge.

In conclusion, addressing the ophthalmological challenges in India requires a multi-faceted approach involving government initiatives, large spending on health care, public awareness, and technological innovation and harnessing the potential of Artificial Intelligence. By prioritizing eye health and fostering a culture of preventive care, India can move closer to achieving the goal of eliminating avoidable blindness and ensuring a brighter future for its citizens.

*Where words are restrained, the eyes often talk a great deal – Samuel Richardson*

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# THE EYE IN PERIL : A GUIDE TO OCULAR TRAUMA

Ocular trauma refers to injuries to the eye or surrounding structures, including the eyelids, orbit (eye socket), and tear ducts, which can result from accidents, blunt force, sharp objects, chemicals, or radiation. It can range from mild irritations to severe damage, potentially leading to vision loss. Prompt medical attention is crucial to assess and treat the injury effectively. Preventive measures, such as protective eyewear, can help reduce the risk of ocular trauma in hazardous environments.

Eye injuries can occur unexpectedly in various settings-at home, the workplace, during sports, or recreational activities. While many of these injuries are preventable, they continue to be a leading cause of avoidable blindness, particularly among children. Prioritizing eye safety and awareness can significantly reduce the risk of such injuries.

## Eye-Opening Statistics:

- Over 2.5 million eye injuries occur worldwide every year.
- 90% are preventable with proper protection.
- Children and industrial workers are among the highest-risk groups.
- Eye trauma is one of the leading causes of vision loss in children.

## Eye Injuries in Children

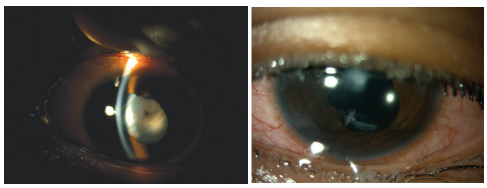
Children are naturally curious, active, and less aware of danger, making them especially vulnerable to eye injuries. The consequences can be more serious in kids, as their eyes are still developing.

Early trauma can lead to amblyopia (lazy eye), strabismus, or even permanent vision loss if untreated.

Most injuries are caused by objects such as wooden sticks, pencils, metallic objects (knife, scissors) stones, glass pieces, vegetative matter, fire cracker injuries which tend to cause penetrating injuries

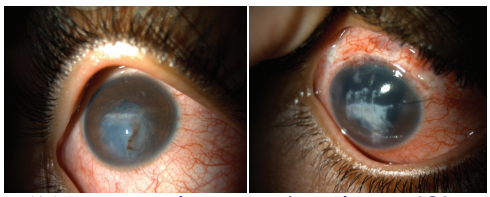
## Common Pediatric Injury Sources:

1. Sharp objects: pencils, scissors, sticks, toys with sharp pointed ends.
2. Projectile toys: Toy guns, darts, slingshots
3. Falls and collisions during play or sports
4. Household chemicals: cleaning products, sprays, insecticides
5. Fireworks and Diwali crackers (especially in festive seasons)



Pre -op : 3 mm corneal tear pencil injury in a 10 year old child

1 month post operative IOL Implantation : Vision 6/9



4*4 mm corneal tear caused by stick injury in a 8 year old child

6 weeks post IOL Implantation : Vision 6/36

## Common Types of Ocular Trauma

| Type of Injury | Description | Severity |
|---|---|---|
| Corneal Abrasion | Scratch on the surface of the eye | Mild to Moderate |
| Hyphema | Blood in anterior chamber of the eye | Serious |
| Orbital Fracture | Broken bones around the eye | Severe |
| Chemical Burn | Caused by acid or alkali substances | Emergency |
| Penetrating Injury | Object piercing the eyeball | Vision-threatening |
| Intraocular Foreign Body | Debris lodged inside the eyeball | Emergency |
| Commotio Retinae | Retinal bruising from blunt trauma | Potentially serious |

## Hidden Dangers: Retinal Injuries

### Commotion Retinae (Berlin's Edema)

- Caused by blunt trauma (e.g. ball or fist).
- Retina appears whitened; vision may be blurred or hazy.
- Can be temporary or permanent, requiring careful monitoring.
- **Why it matters:** Commotio retinae may not cause immediate symptoms, especially in children. It requires detailed eye examination, including fundoscopy or OCT (optical coherence tomography), to detect and manage.

## Intraocular Foreign Bodies (IOFB)

**Dr Sowmya Peri**
Senior Cornea Consultant.

- When a sharp object penetrates the eye, small fragments can get lodged inside the eyeball - these are called intraocular foreign bodies. Common in:
- Industrial accidents (metal shards, splinters)
- Explosions/fireworks
- Gun or slingshot injuries
- Often IOFBS are invisible to the naked eye but can cause endophthalmitis, retinal detachment, or blindness.
- Require urgent surgical removal, by a retina specialist.
- In children, IOFBs may be misdiagnosed or ignored initially, especially if the child cannot communicate pain or trauma history well.

## Adult Eye Injuries at Work

In adults, work-related eye injuries are a major concern, especially in industrial settings where risks include flying metal fragments, machinery, and chemical exposure.

Chemical injuries, particularly from acids or alkalis, can cause instant and severe damage. The key to minimizing harm is immediate irrigation with clean water and emergency medical care.

### Prevention Tips for Adults:

- Adherence to workplace safety protocols
- Ensure workplaces are well-lit and clutter-free to avoid accidents.
- Proper storage and handling of chemicals.
- Replace or repair any broken protective equipment immediately
- When to Seek Emergency Eye Care

### Get urgent care if you notice:

- Bleeding inside the eye or sudden loss of vision
- Flashes of light, floaters, or a curtain-like shadow (possible retinal detachment)
- Sharp foreign body injury or exposure to metal, glass, or chemicals

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EVENTS

# Global Recognition: Sankar Foundation at AIOS-APAO Congress

A distinguished team of doctors from Sankar Foundation, representing various specialties, actively participated in the 40th Asia-Pacific Academy of Ophthalmology Congress, held alongside the 83rd Annual Conference of the All India Ophthalmological Society in Delhi from April 3rd to 6th, 2025.

Our doctors delivered insightful talks and engaging video presentations on diverse topics, showcasing innovations and the latest advancements in ophthalmology. Their contributions were well received and highly appreciated by attendees. The conference, which drew approximately 11,000 delegates from across the globe, provided an enriching experience for our doctors.

**Sankar Foundation Manual Released:** During the conference, a book titled "Sankar Foundation Eye Hospital Manual for Understanding Statistical Methods" was unveiled. Edited by Dr. T. Raveendra, Dr. Sunil Morekar, and Prof. Pallem Krishna Prasad, this practical guide aims to support ophthalmologists in mastering statistical techniques.


Dr. Marc De Smet from Switzerland reading Sankar Foundation Manual

Dr. T. Raveendra, Presenting a copy to Prof. Anshu Arundhati from Singapore

The manual was released by Dr Namrata Sharma, Chairman of Scientific Committee in the presence of Sankar Foundation doctors and other dignitaries. Dr Raveendra presented a copy to Dr Ajit Babu, Ex AIOS President, Andhra Pradesh and other dignitaries.

Among those who participated were Dr. T. Raveendra (Director, CQI & Research & HOD, Glaucoma), Dr. Nasrin (Director, Medical Administration & HOD, Cornea), Dr. T. Krishna (HOD, Retina), Prof. P. Krishna Prasad (Director, Medical Education), Dr. N.J. Sirisha (HOD, Orbit & Oculoplasty), Dr. T. Suparna (HOD, Paediatrics), Dr. Annaji Rao, Dr. Sowmya, Dr. Yasaswini, Dr. M Kavita, and Dr. B Sruti., Dr Krishna Teja, Dr Sushma.

This prestigious event served as a platform for knowledge exchange, fostering collaboration and the pursuit of excellence in ophthalmology.

**Faico Certifications:** Dr. Nasrin, Head of the Cornea Department, and Dr. Yashaswini, Cornea Consultant, have been honored with the prestigious FAICO Certification in Cornea. Additionally, Dr. M. Kavitha Devi, Glaucoma Consultant, has received the FAICO Certification in Glaucoma. These esteemed recognitions were awarded by the All India Ophthalmology Society during the conference.




Dr. Annajirao giving his video presentation on the occasion

## Topics of Presentation at APAO

1) Dr T Raveendra, Director, CQI & Research & HOD, Glaucoma: " Maximizing the outcomes of Trabeculectomy by Post Operative Interventions"
2) Dr Nasrin, Director, Medical Admn & Training & HOD Cornea "SFIOL followed by DSAEK in Aphakia"
3) Dr Annaji Rao Kota, Retina Senior Consultant "Iridodialysis repair, removal of iris claw and sfiol
4) Palla Krishna Teja, vitreoretinal surgeon, consultant " The rise of uninvited trouble maker"
5) Dr Sowmya Peri, Cornea Consultant "Paper on pediatric corneal trauma with traumatic cataract, Pkp post viral keratitis, video on tpk post scleral patch graft"
6) Dr Shruti Goud, glaucoma, consultant "Homocysteinuria"
7) Dr. V K YASASWINI, CORNEA, CONSULTANT "IRIS SCAFFOLD TO THE RESCUE - To Alleviate Positive Vitreous Pressure during TPK"
8) Dr T Krishna, Retina, Consultant " Video presentation"
9) Dr M. Kavitha Devi, Glaucoma, Consultant received certification.

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SPECIAL FOCUS

# HEALTH IS WEALTH, BUT ONLY IF IT'S FOR ALL

## - Democratization of Health/Eye Care is need of the hour

Over the decades, the urban-rural divide in India has created a significant disparity in health resources, leaving the rural population with limited access to quality healthcare. This gap is particularly evident in the management of major illnesses, where rural areas face challenges due to the absence of advanced diagnostic and treatment facilities. Ensuring equitable distribution of healthcare services and providing timely access to them are essential. Democratizing healthcare is, therefore, an urgent and necessary step towards addressing these inequalities.

The healthcare sector is becoming increasingly complex with each passing day. Rapid advancements in medical technology and digitization are revolutionizing diagnosis, treatment, and the delivery of care. The number of specialists trained in advanced medicine is also steadily growing. However, these medical advancements remain largely urban-centric, with their impact predominantly visible in metropolitan cities and urban areas, while small towns and rural regions continue to lag behind. Despite accounting for approximately 65% of India's population, rural areas are home to only 33% of the nation's healthcare workforce. Moreover, nearly 80% of health infrastructure and resources are concentrated in urban areas, which house just 35% of the population.

The rural-urban disparity is particularly pronounced in **ophthalmology,** with the majority of eye care providers concentrated in urban areas. This creates significant challenges for patients in small towns and villages to access essential eye care services. Bridging this gap is crucial, especially as India has an estimated 4.95 million blind individuals and 70 million people with vision impairment. The economic impact is staggering, with blindness alone contributing to an estimated net loss of INR 845 billion in gross national income. The solution lies in early detection and timely treatment to reduce the prevalence of blindness and vision impairment, achieved through equitable and easy access to advanced eye care facilities.

### Need for investment in Eye Care Facilities

Eye camps, while beneficial, are limited in the scope of conditions they can address and often face challenges in ensuring consistent quality of care. Outreach camps and primary care centres in rural areas, predominantly operated by the government and non-profit organizations (NGOs), can manage issues such as cataracts and refractive errors to a certain extent. However, conditions like diabetic retinopathy, age-related macular degeneration, and glaucoma are becoming increasingly prevalent due to an aging population and the rise of lifestyle-related diseases such as diabetes and hypertension. These complex conditions demand specialized diagnosis, advanced treatment, and access to high-quality, comprehensive eye care facilities that include provisions for long-term follow-up care.


There is a pressing need for permanent facilities that provide easy access to advanced, high-quality, and affordable eye care. The private healthcare sector can play a pivotal role in addressing this by investing in the establishment of advanced eye care centres in Tier 2 and Tier 3 towns. This initiative would significantly reduce the burden on patients who currently have to travel long distances to metropolitan cities for specialized treatment. Accessible integrated eye care facilities would ensure early detection of vision problems and timely treatment, preventing the progression of conditions that could lead to blindness.

Establishing infrastructure in smaller towns is more cost-effective compared to big cities, allowing treatments to be offered at prices that are affordable for the rural population. Encouragingly, private eye care hospitals have already begun focusing on smaller towns by setting up state-of-the-art facilities in these areas. These centers are equipped with the latest cutting-edge technology for diagnosis, as well as advanced medical and surgical eye care services to address a wide range of eye diseases."

### Creating a pool of trained eye care professionals

The private sector is playing a key role in addressing another critical barrier to accessible eye care: the shortage of trained eye care professionals. To meet the growing eye care needs of the population, there is an urgent demand for qualified ophthalmologists. **Although there are more than 2,32,000 ophthalmologists globally, developing countries face a significant shortfall, particularly as the aging population requiring eye care services continues to grow at a pace faster than the profession itself.**

The average ophthalmologist-to-population ratio in **developed countries** stands at approximately **39 ophthalmologists per million people.** In contrast, **India, with an estimated 25,000 ophthalmologists, has just 15 ophthalmologists per million people.** This disparity is further amplified by the **urban-rural divide- urban areas boast one ophthalmologist per 10,000 residents, while rural areas lag significantly behind with only one for every 250,000 residents.** Addressing this gap requires urgent action, including training more eye specialists through standardized training and accreditation programs developed collaboratively by the private sector and the government. Encouragingly, many private eye care facilities are already offering fellowships and specialized training programs in ophthalmology. By leveraging existing practices at district levels under a unified framework of SOPs (standard operating procedures) and integrating technology and digitization, we can create an omni-channel model to enhance patient outcomes and reduce treatment costs. Expanding the pool of trained ophthalmologists will also facilitate the adoption of a doctor-led patient care approach, ensuring more personalized and effective treatment.

An extensively trained eye specialist is integral to the success of a doctor-led model of care. Digital technology and telemedicine serve as powerful tools to bridge the gap, enabling patients in

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*My eyes make pictures when they are shut – Samuel Taylor Coleridge*

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# CLEARER VISION AHEAD : PIONEERING ADVANCEMENTS IN EYE CARE

Pioneering advancements in eye care have transformed the field, improving diagnosis, treatment, and prevention of vision issues. Innovations like LASIK surgery have made vision correction precise and minimally invasive. The development of artificial corneas and retinal implants has offered hope to patients with severe visual impairments. Furthermore, breakthroughs in gene therapy are targeting inherited retinal diseases, aiming to restore sight. Diagnostic tools, such as Optical Coherence Tomography (OCT), now provide detailed imaging of eye structures, enabling early detection of conditions like glaucoma and macular degeneration. Additionally, digital technology, like AI-powered diagnostic systems, is revolutionizing eye health management worldwide. The following 6 different types of advancements are reshaping the future of vision care and restoring sight for countless individuals.

## HEALTH IS WEALTH, BUT ONLY IF IT'S FOR ALL

remote areas to receive expert consultations supported by local primary health workers. Equipping primary health workers with the skills for initial patient evaluations can streamline care coordination, ensuring timely referrals to advanced care centres for further diagnosis and treatment when necessary. Additionally, these health workers play a crucial role in counselling and educating patients, addressing their concerns about treatment safety, and encouraging them to pursue necessary interventions.

India, home to the world's largest population of individuals with vision impairment, has earned the unfortunate title of the **'blind capital of the world.'** Addressing this challenge requires the establishment of robust eye care facilities and infrastructure, supported by a growing pool of trained eye specialists. Democratizing access to eye care is a crucial step in reversing this situation and ensuring a brighter, healthier future for millions.

Edited by **K Bangar Raju,** Dy General Manager (PR & Liaison) With inputs from FinancialExpress.com Healthcare

### 1. Femtosecond laser-assisted cataract surgery

Femtosecond Laser-Assisted Cataract Surgery stands as one of the most advanced breakthroughs in eye care. Utilizing ultrafast femtosecond laser pulses (lasting 10-15 seconds) with reduced energy requirements, this technique minimizes the risk of collateral damage during ocular procedures. The laser's ability to create square, leak-resistant architecture has enabled its application in corneal incisions. Additionally, FSL devices excel in performing Limbal Relaxing Incisions (LRIs) for astigmatism treatment-an uncommon application in cataract surgeries. These devices ensure precise, standardized cuts with exact depths and lengths, surpassing the accuracy of traditional hand-done methods.

### 2. Light-adjustable IOLs

Light Adjustable Intraocular Lens (LAL) introduces ground breaking flexibility in cataract surgery outcomes. After the eye heals and achieves refractive stability post-surgery, the lens power can be fine-tuned to deliver optimal vision. This adjustability allows for modifications in both spherical and cylindrical powers, ensuring precise vision correction. By aligning the eye's power with the manifest refraction post-surgery, LAL simplifies preoperative decision-making regarding lens selection, paving the way for more personalized and accurate results.

### 3.Corneal inlays

Corneal inlays, also known as keratophakia, are innovative implants placed within the corneal stroma to address presbyopia-a condition that impairs the eye's ability to focus on nearby objects. There are three distinct types of corneal inlays:

- Refractive corneal inlays
- Corneal reshaping inlays
- Small aperture inlays

While the treated eye may experience a minor reduction in distance vision (typically one or two lines), significant improvement in near vision is achieved. Notably, the dominant eye of emmetropic patients retains normal distance vision. This ensures perfect binocular vision at all distances, along with enhanced intermediate-distance vision-outperforming multifocal intraocular lenses in this regard.

### 4. LASIK Surgery

LASIK eye surgery remains the most popular and widely performed laser refractive procedure for correcting vision problems. It effectively treats near sightedness, farsightedness, and astigmatism, offering a solution for those seeking an alternative to glasses or contact lenses. During the procedure, the cornea-the transparent front layer of the eye-is precisely reshaped using an advanced cutting laser to enhance visual clarity. Additionally, LASIK treatment in India is recognized for its affordability compared to other specs removal surgeries, making it a cost-effective choice for many.

### 5. Small Incision Lenticule Extraction (SMILE)

SMILE, or Small Incision Lenticule Extraction, represents the latest advancement in laser vision correction. This cutting-edge procedure effectively treats myopia (near sightedness) and offers the added benefit of being minimally invasive. Beyond addressing myopia, SMILE is also capable of correcting mild astigmatism, with severity up to 5 diopters, making it a versatile option for vision improvement."

### 6. Contoura Vision Lasik Surgery

Contoura Vision represents the latest advancement in laser eye surgery for glasses removal. It surpasses traditional procedures like LASIK and SMILE (Small Incision Lenticule Extraction), which primarily focus on adjusting the prescription power of glasses or contacts. Contoura Vision not only corrects prescription strength but also addresses corneal irregularities while targeting the visual axis, delivering remarkably sharper and more precise visual results.

Unlike LASIK and SMILE, which operate on the pupillary axis, Contoura Vision is specifically designed to align with the visual axis. This alignment contributes to its superior visual outcomes and minimizes many of the common side effects associated with LASIK and SMILE."

**Conclusion :** So, these are the top advancements in the eye care field. Depending on your vision problem, you should always make an appointment with a reputable eye surgeon.

**We at Sankar Foundation Eye Hospital, Visakhapatnam** help provide the best eye treatments in India. Our facility is equipped with all the modern and cutting-edge technologies required to give the best outcome to our patients. Moreover, we have a team of seasoned eye specialists with immense experience in the field of Ophthalmology.

Edited by K. Bangar Raju, Dy. GM (PR & Liaison) with inputs from https://www.contouravisionindia.com

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Research Findings

# VISION CORRECTION THROUGH THE AGES: A STORY OF SCIENCE AND INNOVATION

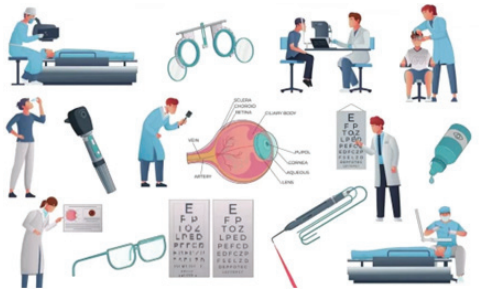
Advances in medical and scientific research have driven remarkable progress in vision correction technology. Since the first recorded use of glasses in 1286, humanity has witnessed numerous ground breaking developments in the field.

**Here are some of the most critical milestones:**

- **1784 :** Benjamin Franklin invented bifocals, enabling the use of a single pair of glasses for both near and distant vision.
- **1930s :** The first contact lenses were created, made from glass to sit directly on the eye's surface.
- **1940s :** Soft contact lenses were introduced, offering a more comfortable alternative to their rigid glass predecessors.
- **1990s :** The advent of LASIK eye surgery revolutionized vision correction. Using a laser to reshape the cornea, LASIK addresses issues like near sightedness, farsightedness, and astigmatism.
- **2000s :** Wave front-guided LASIK and femtosecond "all laser" LASIK emerged. These procedures leveraged detailed eye mapping for improved outcomes, enhancing vision quality while minimizing side effects.
- **2010s :** Minimally invasive surgeries such as SMILE became available, providing shorter recovery times compared to traditional LASIK.
- **2020s :** Implantable contact lenses gained popularity. Placed within the eye, these lenses offer solutions for a wider range of vision problems compared to glasses or external contact lenses.

**The Age of Innovation : Laser Surgery**

The late 20th century brought about a game-changing innovation in vision correction: laser eye surgery, with LASIK being the most well-known form. LASIK offers a permanent solution to refractive errors by reshaping the cornea. It boasts a high success rate and can correct near sightedness, farsightedness, and astigmatism. Despite its benefits, LASIK is not suitable for everyone. Potential



risks and the cost of the procedure are significant considerations for many.

As technology continues to evolve, the future of vision correction promises even greater advancements, pushing the boundaries of what is possible. (Give yourself the gift of clear vision - **schedule an appointment** with your eye care provider at **Sankar Foundation,** and be part of the exciting evolution of vision correction. Experience the quality of vision care you deserve with Sankar Foundation, where the future of eye care meets a tradition of excellence.)

Inputs: **K Bangar Raju,**
Dy General Manager (PR & Liaison) :
Source: www.discovervision.com

# The Eye in Peril : A Guide to Ocular Trauma

- Child refusing to open eye, excessive tearing, or light sensitivity after trauma

### Prevention Tips for All

**At Home:**

- Store cleaning products, glues, and sprays safely out of children's reach.
- Use corner guards on furniture to prevent falls.
- Avoid giving small children toys with sharp edges or projectiles.
- Never let children run while holding pens, pencils, or chopsticks During Sports:

### During Sports & Play:

- Use protective eyewear with shatter-resistant lenses during sports like cricket, basketball, racquet sports, and hockey.
- Supervise outdoor play - especially around fireworks or sharp sticks.
- Educate children on safe play habits and the dangers of throwing objects.

**On the Road:**

- Wear seatbelts to reduce injury from sudden impact.
- Keep windows rolled up when driving through dusty areas.
- Protect your eyes from UV exposure with sunglasses.

### First Aid for Eye Injuries

**✔ Do**

- Flush eyes with clean water for chemical injuries
- Cover the eye loosely with a clean cloth or shield
- Keep the person calm and still
- Seek emergency eye care immediately at the nearest eye hospital.

**✗ Don't**

- Don't rub the injured eye or apply pressure
- Don't try to remove a foreign object yourself
- Don't delay if vision changes occur, even if it is minimal
- Don't wait till symptoms worsen

**Final Thought :** Whether you're preparing a meal, tackling a project, or enjoying time with your child, staying mindful of eye safety is essential. With a little caution, the right protective measures, and smart habits, most eye injuries can be prevented. Together, we can create safer homes and communities, ensuring that every eye enjoys a lifetime of clear and healthy vision.

## Free eye screening camp conducted

Amma Charitable Trust in association with Sankar Foundation Eye Hospital organised a free eye screening camp at A Koduru village in K Kotapadu Maandal in Ankapalle district on 27th April, 2025. The eye screening camp was inaugurated by Sri Bandaru Satynarayana Murthy, MLA, Madugula and commended the services of Sankar Foundation in eliminating avoidable blindness in rural areas. Around 80 patients were screened and 26 patients were selected for cataract surgeries at main hospital in Visakhapatnam. During the camp free medicines were distributed to the patients. Sri Arun Kumar, Manager (Outreach) received a memento from Sri Bandaru Satynarayana Murthy, MLA on behalf of Sankar Foundation.

SANKAR FOUNDATION
EYE HOSPITAL & INSTITUTE
Committed to the Community

## Performance - April 2025

| BASE HOSPITAL | |
|---|---|
| Total Eye Surgeries | 3257 |
| Cataract Surgeries | 2339 |
| Retina Surgeries | 83 |
| Retina Injections | 290 |
| Glaucoma Surgeries | 21 |
| Cornea Surgeries | 265 |
| Pediatric Surgeries | 02 |
| Orbit & Oculoplasty | 77 |
| Total OP Screened | 17,148 |
| **BRANCHES** | |
| **Srikakulam**-Eye Surgeries | 488 |
| OP Screened | 2213 |
| **Maddilapalem**-Surgeries | 107 |
| OP Screened | 1180 |
| **Gajuwaka**-Surgeries | 28 |
| OP Screened | 1040 |
| **Madhurawada**-Surgeries | 15 |
| OP Screened | 610 |
| Total 56 Outreach free eye camps conducted and screened 3656 patients and Performed 1261 surgeries | |

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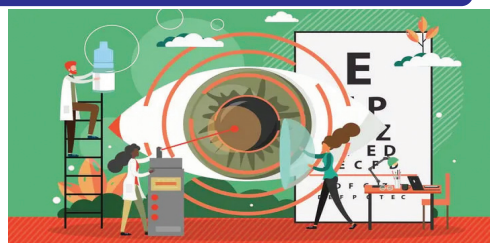
# FROM BLADES TO BEAMS: THE LASIK REVOLUTION

Since its introduction in the 1990s, Laser-Assisted In Situ Keratomileusis, or LASIK, has completely changed the field of vision correction. Millions of people around the world are now able to enjoy sharp, clear vision without the need for glasses or contact lenses because to this amazing medical procedure. In this blog, we'll take a journey through the evolution of LASIK, exploring the ground breaking advancements that have made it one of the most popular and effective vision correction procedures available today, improving safety, precision and outcomes for patients.

- **Early Beginnings:** LASIK evolved from earlier refractive surgery techniques, including radial keratotomy (RK) and photorefractive keratectomy (PRK), which involved reshaping the cornea using incisions or laser energy.
- **Introduction of LASIK (1990s):** The combination of excimer laser technology and microkeratome instruments allowed surgeons to create a thin corneal flap and reshape the underlying tissue, offering faster healing and reduced discomfort compared to PRK.
- Wave front-Guided LASIK: This advancement improved personalization by mapping the eye's unique imperfections, leading to better visual quality and reduced side effects such as halos and glare.
- **Femtosecond Laser Technology:** Replacing mechanical blades, femtosecond lasers enabled more precise corneal flap creation, reducing risks and enhancing safety.
- **SMILE (Small Incision Lenticule Extraction):** A more recent innovation, SMILE reduces dependency on flap creation, providing a minimally invasive alternative with quicker recovery.
- AI & Robotics Integration (Present & Future) – Artificial intelligence and robotic-assisted technology are improving diagnostics, refining treatment plans, and increasing surgical precision, leading to safer and more effective vision correction.

**Safety and Efficacy**

The ongoing advancements in LASIK technology have not only produced better optical results but also increased safety. When carried out by skilled doctors using cutting-edge technology, LASIK is regarded as a very safe and effective operation. The exceptional success rate of LASIK can be attributed



in part to developments in pre-operative screening and post-operative treatment.

**Patient Satisfaction**

Patients who have had LASIK have regularly expressed high levels of satisfaction. Numerous people report more general visual comfort, a decreased need for glasses or contacts, and an improved quality of life. The procedure's popularity has also been aided by its short recovery period and low level of discomfort.

Before LASIK revolutionized vision correction, several pioneering techniques laid the groundwork for refractive surgery:

**1. Radial Keratotomy (RK) –** Developed in the 1970s, RK involved making precise radial incisions in the cornea using a scalpel. These cuts helped flatten the cornea, correcting myopia. However, results varied, and long-term stability was a concern.

**2. Automated Lamellar Keratoplasty (ALK) –** ALK was an early procedure that used a microkeratome to create a corneal flap and remove tissue. It was primarily used for higher degrees of myopia but lacked precision compared to later laser-based methods.

**3. Photorefractive Keratectomy (PRK) –** The first laser-based refractive surgery, PRK, emerged in the late 1980s. It used an excimer laser to reshape the cornea's surface without creating a flap, offering effective correction but with longer recovery times.

Today, LASIK continues to evolve, integrating artificial intelligence, improved diagnostics, and robotic-assisted procedures to further enhance outcomes. As technology advances, vision correction is becoming safer and more effective than ever and personalized treatments for a wider range of patients. The innovations in 2024 emphasize enhanced accuracy, reduced recovery times, and expanded treatment options, catering to the diverse needs of individuals seeking improved vision.

Edited by **K Bangar Raju,**
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