

## Master Health Checkup - An Investment for future

The Master Health Checkup Program has been one of the most successful initiatives at KG Hospital. For more than 40 years, we have screened nearly **40 lakh individuals**, helping people detect diseases early often before symptoms appear.

The concept of a Master Health Checkup is simple. It is designed for people who consider themselves healthy and have no apparent illness but wish to assess their overall health. The goal is to identify hidden medical conditions at an early stage, when they are easier to manage and treat.

Think of your body as your old car. Whether it is five years old or twenty years old, you periodically take it to a service centre to check the tyres, brakes, engine, oil, and other components to ensure everything is functioning properly. Similarly, as we grow older, our bodies undergo changes that may not produce any symptoms initially. A health checkup helps detect these changes before they become serious problems.

A well-maintained vehicle is less likely to break down unexpectedly. Likewise, regular health evaluations can help reduce the risk of serious illness by detecting disease early and enabling timely treatment.

All of us have important responsibilities towards our families, institution and society. Good health enables us to continue fulfilling these responsibilities. Therefore, I encourage every adult to undergo a regular health checkup. This is especially important for business leaders, professionals, industrialists, and individuals working in demanding occupations, where physical and mental fitness are essential. Many professions, such as pilots, bus drivers, also mandate periodic medical examinations

because health is fundamental to safety of their passengers.

One of the biggest challenges in medicine is that many diseases remain silent in their early stages. Diabetes, hypertension, heart disease, kidney disease, and several cancers often develop in the body without obvious symptoms. By the time symptoms such as chest pain, persistent headache, or leg pain appear, the disease may already have progressed.

That is why it is always better to undergo a health checkup before symptoms develop rather than after complications arise.

A comprehensive Master Health Checkup evaluates all the “major organ systems” of the body. It begins with a detailed medical history and a thorough physical examination from head to toe. Depending on the individual's age, gender, risk factors, and medical history, the evaluation may include laboratory investigations, Chest X-ray, Electrocardiogram (ECG), Echo, U.S Scan Examination, Treadmill Testing, Calcium Scoring, 128 CT Scan or MRI in the body.

Screening tests can detect many conditions at an early stage. Mammography can identify many breast cancers before a lump becomes noticeable. Prostate-specific antigen (PSA) testing may help identify men who require further evaluation for prostate disease. Ultrasound examination can detect abnormalities in organs such as the kidneys and liver, while routine blood tests can reveal diabetes, hypertension-related risk factors, anaemia, kidney disease, and other metabolic disorders.

At KG Hospital, we also offer focused evaluations based on individual needs. In addition to the standard Master Health



Padma Shri. **Dr. G. Bakthavathsalam**  
Chairman, KG Hospital

Checkup package, advanced cardiac assessment including coronary calcium scoring and CT coronary angiography may be recommended for selected individuals who are at increased cardiovascular risk.

The Master Health Checkup was pioneered in Coimbatore by KG Hospital and continues to be one of our flagship preventive healthcare programs. The standard package is available at an affordable cost, with optional advanced investigations for those who require them. Global Health checkup is also available.

The cost of preventive screening is modest when compared with the financial and emotional burden of treating advanced disease or prolonged hospitalization. More importantly, early detection often leads to simpler treatment, better outcomes, and improved quality of life.

My intention in promoting the Master Health Checkup is not merely to encourage people to undergo tests it is to encourage them to take charge of their health. Detecting disease early allows timely intervention and helps people.

Your health is your greatest asset. Invest in it wisely. A Master Health Checkup today may help protect your health for many years to come.

## "window To Stroke"- Timely Eye Examination Leads To Life Saving Carotid Intervention



**Dr. Manoj Ramachandran**  
Chief Ophthalmologist



**Dr. Sabareesh. S**  
Interventional Neuro  
and Vascular Radiologist



**Dr. Ranjith. R**  
Interventional Cardiologist



**Dr. Sameera Parveen K M**  
Ophthalmology PG

A Case Report on Integrated Management Of Central Retinal Artery Occlusion (CRAO).

### Introduction

Central Retinal Artery Occlusion (CRAO) is an Ophthalmic emergency analogous to an ischemic stroke of the eye (ocular stroke equivalent). Sudden interruption of retinal arterial blood flow can lead to irreversible retinal ischemia and profound visual loss within a short duration. Prompt diagnosis and coordinated multidisciplinary management are crucial in improving visual prognosis and preventing life threatening systemic vascular events.

At KG Hospital, an integrated team approach involving Ophthalmology, Cardiology and interventional Radiology, helped in early diagnosis, systemic evaluation, and timely management of a patient presenting with sudden painless diminution of vision due to CRAO.

### Case Report

A 59 year old male presented to the Ophthalmology Outpatient Department with sudden painless diminution of vision in the right eye of acute onset since early morning 3:00AM. There was no H/O

trauma or previous ocular surgery. The patient was a K/C/O Type 2 DM on regular treatment. On examination, visual acuity in the right eye was markedly reduced to 3/60, while the left eye maintained good visual acuity. Anterior Segment examination was essentially Within Normal Limits in both eyes. Relative Afferent Pupillary Defect (RAPD) was noted in the right eye. Fundus examination of the right eye revealed retinal whitening with a characteristic cherry-red spot at the macula suggestive of CRAO. The left eye fundus was Within Normal Limits. Fundus Photography and Optical Coherence Tomography (OCT-Macula) were performed for documentation and assesment.

### Integrated Multidisciplinary Management

Recognising CRAO as a vascular emergency, the patient underwent urgent systemic evaluation through a multidisciplinary collaborative approach.

### Ophthalmology Team

Established the prompt diagnosis clinically and initiated emergency ocular measures including:-

- Ocular massage
- Retinal imaging

and a timely refer to the Cardiologist for further evaluation and management.

### Cardiology Evaluation

The Cardiology team evaluated the patient for underlying Cardiovascular and embolic risk factors. Blood Pressure assessment and vascular risk stratification were performed. Laboratory investigation revealed dyslipidemia with elevated Triglycerides and LDL levels. Carotid Doppler Study demonstrated nearly 80% stenosis with significant plaque involving the right proximal ICA. The patient was initiated on antiplatelet therapy and vascular risk factor control measures.

### Interventional Radiology

Further evaluation by Interventional Radiologist, was advised Digital Subtraction Angiography (DSA) confirmed 99% stenosis (critical stenosis) of Proximal internal carotid artery. Three weeks later, the patient successfully underwent Carotid angioplasty with stenting, restoring adequate intracranial blood flow and significantly reducing further risk of ischemic stroke and recurrent vascular occlusion.

## Discussion

Central Retinal Artery Occlusion is considered the ocular equivalent of cerebral stroke and requires immediate intervention. The common etiologies include emboli originating from carotid atherosclerosis or cardiac sources. Systemic associations include Hypertension, Diabetes Mellitus, dyslipidemia, smoking and cardiovascular diseases.

Patient typically present with sudden , profound, painless monocular visual loss. Fundus examination classically demonstrates retinal whitening / opacification with a cherry-red spot at the fovea due to preserved choroidal circulation.

Visual Prognosis in CRAO is generally poor when treatment is delayed beyond 90-120minutes from the onset of symptoms, due to irreversible retinal ischemic damage(in this case, patient presented more than 7 hours after symptom onset). However, early recognition and prompt multidisciplinary intervention may help salvage retinal function and prevent devastating systemic vascular events such as CVA or myocardial infarction.

## This case highlights the importance of:-

- Early Ophthalmic diagnosis acts as a first warning sign of systemic vascular compromise.
- Immediate vascular evaluation.
- Multidisciplinary coordination
- Systemic risk factor control
- Early vascular intervention
- Long-term cardiovascular surveillance

## Outcome And Followup

The patient was managed with prompt ocular intervention and systemic vascular evaluation. Risk factor modification and cardiovascular preventive measures were initiated . Continuous ophthalmic follow-up was advised to monitor retinal status and visual recovery.

This case emphasises that timely multidisciplinary Intervention can play a pivotal role not only in preserving vision but also in preventing future systemic catastrophes.

## Conclusion

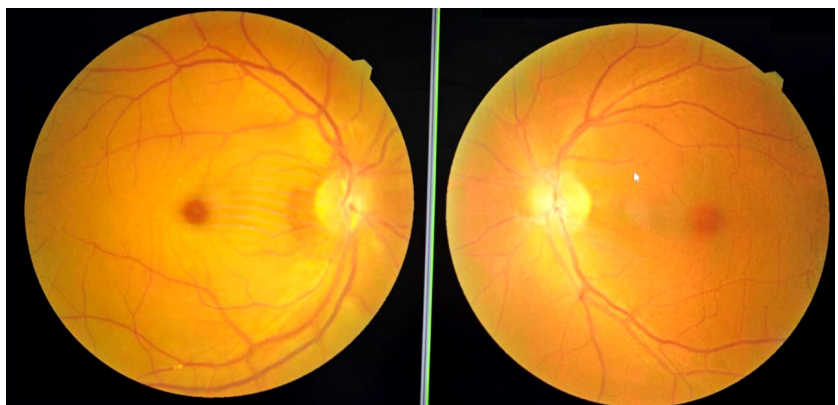
CRAO presents a true ocular emergency where every minute counts. The successful management of this patient at KG hospital demonstrates the value of collaborative, integrated approach involving Ophthalmology, Cardiology and Interventional Radiology. Early recognition, rapid systemic evaluation, and coordinated care remain the cornerstone in saving vision and safeguarding life as well.



Carotid angiogram image showing critical stenosis of right proximal ICA (before angioplasty and stenting)



Image showing Right proximal ICA (after angioplasty and stenting)



Fundus photo showing Right eye-retinal whitening with cherry-red spot suggesting CRAO. Left eye-Within Normal Limits

## AI in Cataract Surgery: The Future of Vision Care!



**Dr. Manoj Ramachandran**  
Chief Ophthalmologist



**Dr. Yamuna Devi P**  
Consultant Ophthalmologist



### Artificial Intelligence and Cataract Surgery: What Does the Future Hold?

Cataract remains the leading cause of reversible blindness worldwide. Cataract surgery is one of the most successful surgical procedures performed today, helping millions regain clear vision. As technology advances, Artificial Intelligence (AI) is beginning to play an increasingly important role in eye care and cataract management.

While AI cannot replace the skill, judgment, and experience of an ophthalmologist, it has the potential to make cataract care more precise, personalised, and efficient.

#### What is Artificial Intelligence?

Artificial Intelligence refers to computer systems designed to analyze data, recognize patterns, and assist in decision-making. In ophthalmology, AI can analyze eye images, biometric measurements, and clinical information to support doctors in diagnosis and treatment planning.

### Current Applications of AI in Cataract Care

#### Early Detection and Screening

AI-powered systems can analyze photographs of the eye and detect cataracts with remarkable accuracy.

#### Benefits include:

- Faster screening
- Improved access in remote areas (larger volume)
- Identification of patients requiring specialist evaluation
- Reduced burden on healthcare systems

#### Surgical Planning

Every cataract surgery is unique. Before surgery, ophthalmologists perform detailed measurements of the eye to determine the most suitable intraocular lens (IOL).

#### AI can assist by:

- Analyzing biometric data
- Improving IOL power calculations

- Predicting postoperative visual outcomes
- Supporting personalized lens selection

The goal is to help patients achieve the best possible vision after surgery.

#### Improving Surgical Precision

Modern cataract surgery already relies on advanced technology. In the future, AI may further enhance surgical precision by:

- Assisting with surgical guidance
- Identifying critical anatomical structures
- Providing real-time feedback during surgery
- Enhancing safety measures

These tools could help surgeons optimize outcomes while maintaining high safety standards.

#### Postoperative Monitoring

After surgery, AI may assist in monitoring recovery by analyzing images and identifying early signs of post-operative complications such as:

- Inflammation
- Corneal edema
- Elevated intraocular pressure
- Posterior capsule opacification

Earlier detection may allow timely intervention and improved patient outcomes.

## AI-POWERED PRECISION THROUGH EVERY STEP



### 1. SMART SCREENING

AI analyzes eye scans to detect cataracts earlier and more accurately.



### 2. PRECISE PLANNING

Advanced AI algorithms calculate the best intraocular lens (IOL) power for you.



### 3. REAL-TIME GUIDANCE

AI-guided systems assist the surgeon with real-time feedback for enhanced precision and safety.



### 4. BETTER OUTCOMES

Improved accuracy leads to better visual outcomes and greater patient satisfaction.

## THE CATARACT SURGERY JOURNEY



**1. Cataract**  
Cloudy lens causes blurred vision.



**2. Removal**  
Cloudy lens is removed with advanced technology.



**3. IOL Placement**  
A clear, premium IOL is placed inside the eye.



**4. Clear Vision**  
Enjoy sharper, brighter, and more vibrant vision.

## WHY AI MAKES A DIFFERENCE



### Higher Accuracy

AI enhances precision in measurements and procedure.



### Personalized Care

Tailored IOL selection for your unique eyes.



### Greater Safety

Real-time guidance reduces risks and improves safety.



### Better Outcomes

More predictable results and higher patient satisfaction.

## The Future of AI in Cataract Surgery Personalised Cataract Surgery

Future AI systems may create individualized surgical plans based on:

- Eye anatomy
- Lifestyle needs
- Occupation
- Visual expectations
- Existing eye diseases

This could help deliver truly customised vision correction for each patient.

## Smart Operating Rooms

The operating rooms of the future may integrate AI with surgical microscopes, imaging systems, and digital guidance platforms.

## Potential features include:

- Real-time surgical analysis
- Automated safety alerts
- Enhanced visualization
- Workflow optimization

Such systems may improve efficiency while supporting surgeon decision-making.

## Predictive Analytics

### AI may help predict:

- Surgical difficulty
- Risk of complications

- Recovery patterns
- Expected visual outcomes

These predictions could improve patient counselling and surgical planning.

## Expanded Access to Eye Care

One of AI's greatest promises lies in increasing access to eye care globally.

AI-assisted screening programs may help identify cataracts earlier in underserved communities, enabling timely referral and

treatment.

This could significantly reduce timely and preventable vision loss worldwide.

## Will AI Replace Cataract Surgeons?

The simple answer is No.

Cataract surgery requires:

- Clinical judgment
- Surgical expertise
- Human decision-making
- Compassionate patient care
- Management of unexpected situations

AI can provide valuable secondary support, but it cannot replace the experience and skill of a trained ophthalmologist physically.

## The future is not AI versus surgeons,

it is AI working alongside surgeons to deliver

safer,

precise,

personalised care.

## Looking Ahead

Artificial Intelligence is expected to transform many aspects of cataract care over the coming years.

From early detection and surgical planning to postoperative monitoring and personalised treatment strategies, AI has the potential to enhance patient outcomes and improve access to micro-vision-restoring surgery.

As technology continues to evolve, the combination of skilled ophthalmologists and intelligent digital tools may usher in a new era of cataract care, one where patients benefit from greater precision, effective, safety, and visual success than ever before.

## KEY ROLE

**AI is not replacing cataract surgeons  
it is empowering them.**

The future of cataract surgery lies in combining human expertise with intelligent technology to provide the best possible micro vision for every patient's need.



## Benign but Critical: How Early Surgical Intervention Saved Three Patients with Spinal Meningiomas



**Dr S. Rajkumar**  
Brain & Spine Surgeon



**Dr. R. Senthilkumar**  
Anaesthesiologist



**Dr. Lokesh**  
(Junior Resident  
Dept. of Neurosurgery)

### Introduction:

Spinal meningiomas are benign tumors originating from the meninges, the protective membranes covering the spinal cord. Despite their noncancerous

nature, their slow growth can lead to significant spinal cord compression, resulting in neurological deficits such as weakness, numbness, gait disturbances, and even paralysis if not diagnosed and treated promptly. These cases highlight the importance of early intervention and the effectiveness of surgical management in restoring neurological function and improving quality of life.

### Investigations & Diagnostic Process:

All three patients presented with symptoms indicative of spinal cord compression, including lower limb weakness, numbness, and difficulty walking. The following evaluations were conducted:

### Magnetic Resonance Imaging (MRI):

- Revealed well-defined, dura-based, intradural extramedullary tumors compressing the spinal cord at specific dorsal and thoracic levels.
- Lesions appeared iso- to hypointense on T1-weighted images and iso- to hyperintense on T2, with homogenous postcontrast enhancement.
- Tumors were seen adherent to or arising from the dura mater, confirming their meningeal origin.

### Histopathological Examination:

- Postoperative tissue analysis confirmed the diagnosis of meningiomas in all cases.
- Two cases were WHO Grade I meningiomas, known for benign behavior and slow growth.

- One case was identified as a mesothelial meningioma.

### Case Summaries:

#### Case 1:

- **Patient:** 47-year-old male.
- **Symptoms:** One-week history of difficulty walking and bilateral lower limb numbness.
- **Findings:** MRI revealed a dura-based lesion at D7-D8 level compressing the spinal cord.
- **Surgery:** D7-D8 laminectomy with complete excision of the tumor and duraplasty.

#### Case 2:

- Patient: 72-year-old female.
- Symptoms: Progressive lower limb weakness and bilateral pain over one month.
- Findings: MRI showed a D4-D5 meningioma causing dorsal spinal cord compression.
- Surgery: D4-D5 laminectomy with tumor removal, resulting in symptom relief.

#### Case 3:

- Patient: 46-year-old female.
- Symptoms: Rapidly progressing paraplegia.
- Findings: MRI revealed a dorsal meningioma at D4-D5 causing significant cord compression.
- Surgery: D4-D5 laminectomy for tumor excision, leading to notable neurological improvement.

### Operative Procedure & Intraoperative Findings:

- The surgical approach involved posterior laminectomy at the affected levels to expose the dura mater.

- The dura was carefully opened, revealing a well-circumscribed, reddish, and firm tumor adherent to the dura.
- Tumors were meticulously dissected free from the dura and neural structures, ensuring complete resection while preserving the integrity of the spinal cord.
  - Duraplasty was performed to repair the dura when necessary, maintaining a closed and protected spinal canal.
- The tissue specimens obtained during surgery are typical of meningiomas—extra-axial, dural-based, and well-circumscribed, which generally facilitates complete excision. Intraoperative photographs displaying tumor excision will be added.

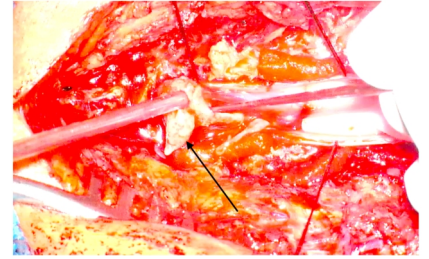
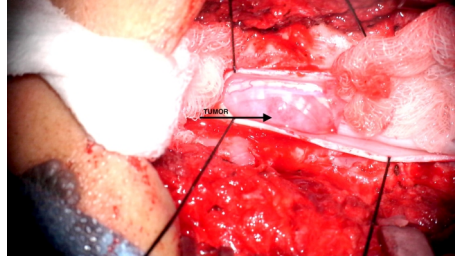
### Postoperative Course & Outcomes:

- All three patients experienced significant neurological recovery post-surgery, with improvements in motor strength, sensation, and gait.
- No major surgical complications were observed.
- Patients were enrolled in regular monitoring protocols.

### Conclusion:

These three cases underscore the vital importance of early diagnosis and timely surgical intervention in patients with spinal meningiomas. Despite their benign pathology, these tumors can cause severe neurological impairment if left untreated. Surgical decompression and tumor excision are highly effective, leading to remarkable recovery and improved quality of life. Awareness of the clinical and radiological features of spinal meningiomas can facilitate prompt management, preventing irreversible spinal cord damage.

**Key Message:** Benign spinal tumors can have a profound impact on neurological function, but with prompt diagnosis and precise surgical removal, patients can regain mobility and independence. These cases exemplify the critical role of neurosurgical intervention in managing spinal meningiomas.



## Nephrologists of KG Hospital Create a Landmark Record in Hypertension Screening

- The Department of Nephrology at KG Hospital has achieved a remarkable milestone in the fight against hypertension by conducting free blood pressure screening for every patient visiting the hospital for the past six years.
- During this period, the team has screened more than 5 lakh individuals, making it one of the largest hospital-based hypertension screening initiatives in the region.
- The screening has revealed an alarming fact: nearly 10% of the people screened were found to have high blood pressure. More importantly, over 50,000 individuals were diagnosed with hypertension without being aware of their condition. This highlights why hypertension is often called the "Silent Killer."
- Hypertension usually develops without any warning signs or symptoms. If left undiagnosed or inadequately treated, it can lead to serious and potentially life-threatening complications, including:
  - Heart attack
  - Stroke
  - Kidney failure
  - Loss of vision (blindness)
- Studies indicate that a significant proportion of people with hypertension in India remain undiagnosed or inadequately treated, increasing their risk of cardiovascular and kidney diseases. Regular blood pressure screening and timely treatment can prevent these complications.
- The Department of Nephrology at KG Hospital has developed special expertise in the diagnosis and management of hypertension. Dr. Chakravarthy, a leading Nephrologist at KG Hospital, has undergone advanced fellowship training in Hypertension from England. With the experience of screening and managing more than one lakh patients, he has earned recognition for his expertise in comprehensive hypertension care.
- The department also encourages the public to monitor their blood pressure regularly using a validated digital blood pressure monitor, enabling early detection and better long-term control.
- For patients requiring a more detailed evaluation, 24-hour Ambulatory Blood Pressure Monitoring (ABPM) is considered one of the most reliable methods for diagnosing hypertension. This test records blood pressure continuously throughout the day and night, helping doctors identify hidden hypertension and assess treatment effectiveness.
- A key feature assessed by ABPM is the nocturnal blood pressure dip. Normally,



blood pressure falls during sleep. Individuals who do not experience this normal nighttime reduction (known as non-dippers) have a significantly higher risk of stroke, heart disease, and kidney damage. Early identification of this pattern allows timely intervention and personalized treatment.

- The Department of Nephrology, KG Hospital, remains committed to promoting hypertension awareness, early diagnosis, and effective treatment to reduce the burden of cardiovascular and kidney diseases in the community.

### Department of Nephrology - KG Hospital

Consultants:

Dr. Chakravarthy (Mob - 97916 87452)

Dr. Ilangovan.V (Mob - 87540 25648)

Dr. Ramaswamy.S (Mob - 96009 00078)

Dr. Jainendran Jain (Mob - 7003262736)

Padmashri **Dr. G. Bakthavathsalam** MS, FICS, FCCP, FAMS, FMMC, D.Sc  
Chairman

**52**  
Years of  
MEDICAL SERVICE



**KG Hospital**  
Trendsetter in Health care

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**PRECISE, ADVANCED, AND FASTER.**



**INTRODUCING**

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