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The Minimally Invasive Coronary Artery Surgery



About Our Hospitals

At Our Hospitals, the focus has always been to provide patient-centric health care of exacting standards. In achieving this we adopt cutting-edge techniques and technologies that are on par with the finest hospitals in the world. This time around, we bring the best in the treatment of coronary artery disease.

We have more than 10000 beds across 75 hospitals in Chennai, Bangalore, New-Delhi, Kolkatta, Mumbai, Hyderabad India; **ASIAN HEALTHCARE** is one of the largest healthcares Facilitator in Asia. Referred to as many patient to India', To the Our Hospitals Group, Fortis Hospital Group, Gleneagles Global Hospitals india, Max Healthcare with the help of latest technology and exceptionally committed medical practitioners, provide outstanding healthcare facilities to people.

Conventional CABG v/s MICS

Coronary artery disease that requires coronary artery bypass or CABG as is commonly referred to, somehow strikes fear. MICAS or MICS CABG is a safe and complete operation that changes outcomes entirely.

MICS CABG or MICAS stands for Minimally Invasive Coronary Artery Surgery. It is a relatively new and advanced technique of performing coronary bypass for coronary artery disease. In this technique the heart is approached through the side of the left chest via a small 4cm incision. This cut is placed just under the nipple. The chest is entered between the ribs without cutting any bones and by splitting the muscle.

Similar to a regular heart surgery the operation is performed using all arteries or a combination of arteries and veins removed from the leg. The vessel from the leg in this operation is also removed endoscopically without cutting the skin over the leg.

Highly advanced instrumentation and advanced techniques allow for the operation to be performed very safely.

MICS CABG has several advantages over the traditional technique.

First and foremost is the fact that no bones are cut.

Second, blood loss is almost negligible eliminating blood transfusion in most and eliminating blood-borne infection.

Third, all infections are reduced whether it be wound infections or post surgical lung infection. This makes the procedure ideal in diabetics and older patients who have poor resistance to infection.

Fourth, the incision is so cosmetic and measures just 2 – 3 inches that it's practically impossible to tell that a heart operation has been done.

All these benefits put together make for ultra short hospitalization and recovery. The best part is that unlike previous techniques, all the blocks irrespective of their location on the heart can be bypassed in a safe and predictable manner.

High Volume of Cardiothoracic Procedures



SAVE YOUR HEALTH

Our Hospitals has performed more than 4000 heart and close to 1000 lung operations in four years. The surgical team at Our has pioneered several techniques and initiated the minimal access programme with over 1000 happy patients.

Dr. Sathyaki Nambala (Apollo Hart Institute Bangalore)

Dr. Joseph Xavier (Fortis Hospital Bangalore)

Dr. K R Bala Krishnan (Fortis Hospital Malar Hospiotal Chennai)

Dr. M M Yousuf (Gleneagles Global Hospital Chennai)

More than 5000 minimally invasive heart operations and over 15000 open heart surgeries

Why Minimally Invasive Cardiothoracic Surgery?



- Reduced pain and trauma for your patient
- Less blood loss
- Lower infection risk
- Shorter hospital stay
- Quicker recuperation
- More rapid return to normal lifestyle
- Minimal scarring
- Significantly reduced risk factors in future operations

Minimally Invasive Surgery The Technique

Surgeons Pioneer the Superior Single Operator Technique in India "Before you embark on any minimally invasive procedure, you need to be an experienced and confident surgeon in the open approach, because minimally invasive surgeries are more complex and demanding," explained

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The first minimally invasive heart operation was performed in Stanford in 1996 and since then enormous progress has been made in both techniques and the technology involved in minimally invasive heart surgery.

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Dr. M M Yousuf (Gleneagles Global Hospital Chennai)
has completed his training at the Harvard Medical School which is an affiliate of the Brigham and Women Hospital in Boston for minimally invasive techniques.

"Brigham and Women is in itself a pioneer in MICS techniques where these operations are performed on a daily basis, at Our, Bangalore these operations are performed 4 or 5 days in a week making the entire team well versed with the techniques and patient management. This is key as it makes it very safe for patients."

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Dr. Joseph Xavier (Fortis Hospital Bangalore)
Dr. K R Bala Krishnan (Fortis Hospital Malar Hospiotal Chennai)
Dr. M M Yousuf (Gleneagles Global Hospital Chennai) said.



The Heart Valve Center

The Heart Valve Center at the Center for Advanced Cardiovascular Care at Hospitals provides comprehensive diagnosis and advanced treatment and care for patients with any valve pathology. Cardiac surgeons and cardiologists at the center are skilled in the diagnosis, medical management and minimally invasive surgical management of both aortic and mitral valve disease. The programme is the most advanced in the country for minimal access valve surgery in particular.

Understanding Surgery For Valvular Heart Disease



Heart valve disease affects millions of Indians across all age groups. Surgery for valve disease has progressively evolved and moved towards less invasive techniques that aim at sternum preservation and more cosmetic incisions while continuing to equal or superior outcomes to conventional sternotomy techniques. Similar to minimal access coronary revascularization the minimally invasive valve (MIVS) techniques offer a painless, non-bone-cutting alternative with faster recovery and minimal use of blood products. The center has performed the largest series of MIVS procedures in the country with outcomes that are exceptional in all aspects of valve surgery. The minimal access experience includes re-operative valve surgery and valve surgery after CABG.

Surgery for Aortic Valve Disease (MiniAVR)

Aortic valve surgery traditionally requires a sternotomy. At the valve center 'sternotomy' has been done away with for the last 4 years. No patient requires the sternum to be cut irrespective of the severity of aortic valve disease. Patients who require a sternotomy are those with concomitant coronary artery disease that requires CABG.



Non Sternotomy Parasternal Approach Offers Exceptional Outcomes

It's important to understand that MIVS for the aortic valve can be performed by two approaches. The upper Hemisternotomy technique involves partially cutting the breast-bone or sternum through a two inch skin incision (Fig). This technique, while easier to perform, is recommended only in special circumstances such as when the aorta is heavily calcified and requires replacement or when the whole aortic root and part of the arch needs replacement.

The no sternotomy or Parasternal approach through the intercostal space is more superior as it eliminates cutting any bone. This approach is suitable for almost all patients and provides superior outcomes. (Fig). This approach is commonly used at the center today and is recognized across the world.

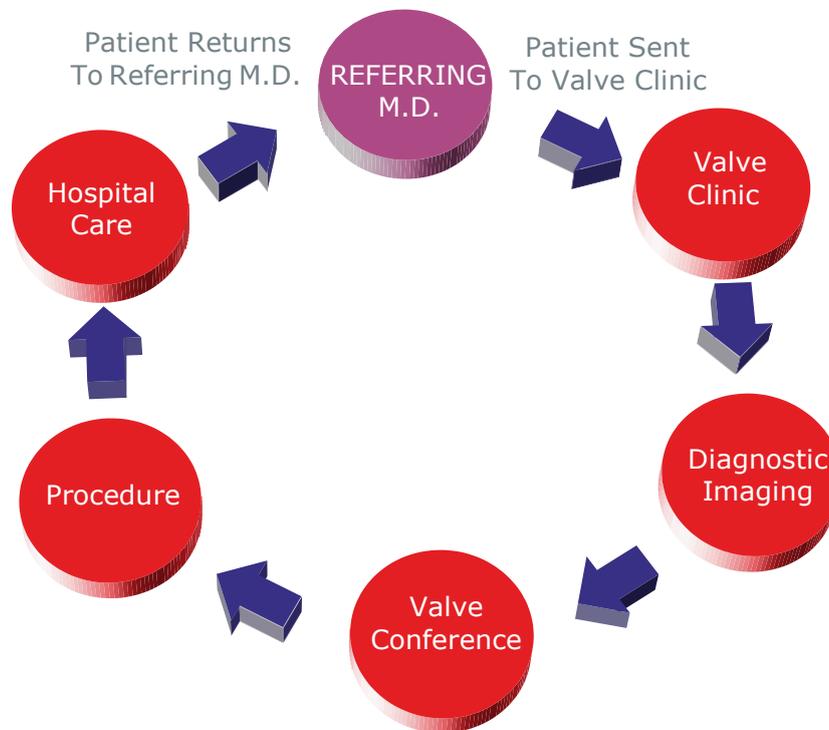


Non-Sternotomy Techniques For Mitral Valve Surgery

Surgery for mitral valve disease has undergone an enormous change over the last decade and the Valve Clinic at Our, led by Dr. Nambala offers unparalleled expertise in minimal invasive techniques for both repair and replacement. It is important to understand that a very large experience in traditional open surgery is what has led the team to being able to provide equally good results in a minimal access approach. The technique involves performing the procedure from a small 2-inch incision under the right breast that's well hidden, painless and cosmetic particularly in women.



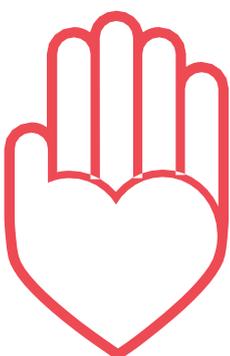
The Valve Clinic Team Workflow



A various types of patient care options are available to referring physicians, including:

- Cardiology Consult
- Consult and Follow up (Shared care) with referring physician
- CardiacSurgeryConsultationonly(NoCardiologyconsultationrequired)

Once treatment is complete, unless specifically requested by the referring physician, the patient is always referred back to his or her original physician, which benefits patients and their referring physicians alike.



The Valve Clinic is a leader in development and application of minimally invasive valve treatment approaches. Our surgeon's have completed more MICS procedures than any other team in the country.

Cardiothoracic Surgical Procedures

The skilled surgeons at Our Hospitals Bangalore, Fortis Hospital, Bangalore & Chennai, and Fortis Escorts Hospital New Delhi offer a comprehensive array of minimally invasive and conventional cardiothoracic surgical procedures.

Coronary Bypass Surgery

- Coronary Artery Bypass Surgery (CABG)
- Minimally Invasive Coronary Artery Bypass Surgery
- Endo Vein Harvest
- Off-Pump Coronary Artery Bypass Surgery (OPCABG)
- Arterial Revascularization (Internal Mammary Arteries, Radial Artery, Gastroepiploic Artery)
- Redo Coronary Revascularization (With or Without Concomitant Valve Surgery)
- Trans Myocardial Revascularization

Valve Surgery

- Mitral Valve Repair/Replacement
- Aortic Valve Replacement/Repair
- Aortic Root Enlargening Procedures
- Aortic Root Replacement
- Tricuspid Valve Repair
- Double and Triple Valve Repair/ Replacement
- Redo Valvular Surgery
- Ross Procedure
- MAZE Procedure for Atrial Fibrillation

Thoracic Surgery

- Thoracotomy Lung Biopsy
- Thoracotomy Lung Resections and Pneumonectomy
- Thoracotomy Decortication
- Spinal Exposure for Orthopaedic and Neurologic Procedures

Congenital Heart Surgery

- Complex Congenital Heart Surgery
- Simple Congenital Heart Surgery
- Tetralogy of Fallot
- Double Outlet Right Ventricle (DORV)
- Single Ventricle Surgery
- Atrial Septal Defect (ASD)
- Ventricular Septal Defect (VSD)
- Patent Ductus Arteriosus (PDA)

Minimally Invasive Thoracic Surgery (Video Assisted-VATS)

- VATS Lung Biopsy
- VATS Bullectomy and Pleural Sclerosis
- VATS Lung Resection
- VATS Decortication
- VATS Placement of Epicardial Pacemaker Leads
- VATS Resection of Thoracic Tumours
- VATS Lobectomy

Minimally Invasive Valve Surgery

- Mitral Valve Repair/Replacement
- Aortic Valve Repair/Replacement
- Aortic Root Enlargening Procedures
- Tricuspid Valve Repair
- Double Valve Surgery
- Redo Valvular Surgery
- MAZE Procedure - For AF

Minimally Invasive Surgery (Additional Applications)

- Repair of Atrial Septal Defects (Primum and Secundum)
- Resection of Atrial Tumours (Myxoma)

Aortic Surgery

- Repair of Ascending Aortic/Aortic Arch/Descending Aortic Thoracic Aneurysms and Dissections

Mediastinal Surgery

- Mediastinoscopy and Biopsy
- Mediastinotomy and Biopsy
- VATS Resection of Mediastinal Tumours

Esophageal Surgery

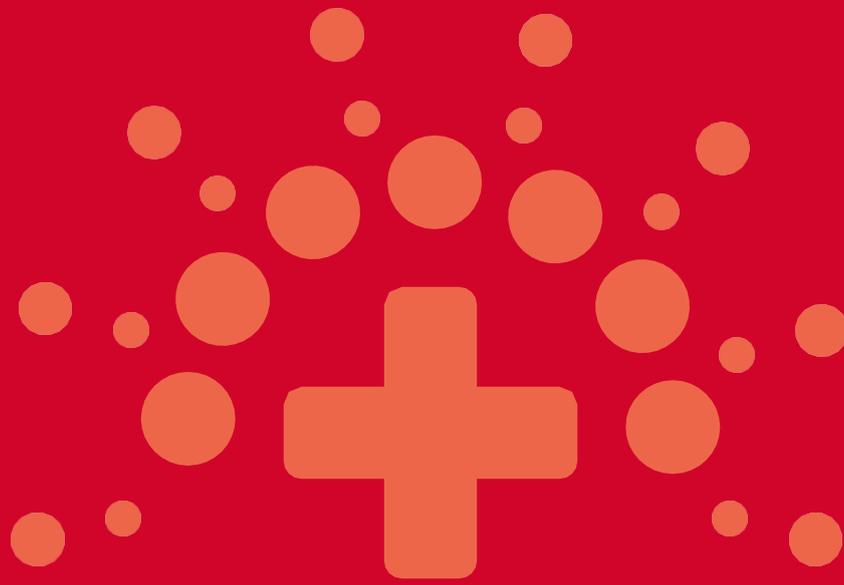
- Resection of Esophageal Tumours
- Achalasia Esophageal Surgery
- Zenker's Diverticulum Surgery

Vascular Surgery

- Carotid Surgery (Endarterectomy)
- Surgery for Varicose Vein
- AV Fistula
- Pulmonary Endarterectomy
- Aorta-Femoral Bypass
- EVLT - Endovenous Laser Treatment of Varicose Vein

Cardiac Rhythm Surgery

- Pacemaker Insertion
- Automatic Implantable Cardioverter Defibrillator (AICD)
- Bi-Ventricular AICD
- Lead Extraction
- MAZE Procedure for Atrial Fibrillation



Dr. Sathyaki Nambala

MS, DNB, MCh (Cardiothoracic and Vascular Surgery) Senior Consultant and Chief Cardiovascular Surgeon, Our Hospital, Bangalore

Senior Fellow, Harvard Medical School, USA and Toronto General Surgeon, University of Toronto, Canada



HEART INSTITUTES



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