



## CK Birla Hospitals – Operating Philosophy

### Clinical Excellence

- 1 Delivery of best patient care; from prevention to treatment of the most serious and complex human diseases.
- 1 Use of international guidelines, protocols and care pathways to ensure best clinical outcomes.
- 1 Institute of choice for best clinical and nursing talent coupled with world-class infrastructure and equipment.

### Ethical Conduct

- 1 Honest and transparent in doing the right thing for the patients by improving outcomes and not procedures.
- 1 Adherence to highest standards of professionalism with clear communication of treatment plan.

### Patient Centric

- 1 Primacy to comfort and convenience of patients and their families.
- 1 A strong patient connect and trust through compassion and empathy.
- 1 Inclusive in embracing and respecting different backgrounds of patients.

**BMB**  
CHEST PAIN  
CENTRE

BMB Chest Pain Centre is a 24x7 Emergency unit of the hospital equipped to deal with most Critical Cardiac Emergencies

033 3040 3040

REVOLUTIONISING  
every **BEAT**

ADVANCED  
Cardiac Surgery  
Patient Information Brochure

BMB, the first NABH accredited hospital in India is the only distinctive 204-bedded hospital in Eastern India dedicated to Cardiac Care with 75 CCU and HDU beds, 3 Cath Labs and 4 OTs. Catering to a wide spectrum of cardiac ailments in children and adults, the hospital has been tendering quality patient care, diagnosis, surgery and research for over 28 years. Specialising in Minimally Invasive, Invasive and Paediatric Cardiology, the hospital houses eminent Cardiologists and Cardiac Surgeons who have efficiently performed over 1.9 lakh Cath Procedures and 22,000 Cardiac Surgeries over the years.

The highly crowned Cardiac Centre, combines its advancement in expertise and technology to bring you state-of-the-art treatment. Making unprecedented strides in surgical techniques, extensive research and progressive skills, read on below to agree why it's unequivocally recognised and trusted for enhancing your heart and life.

## MICS CABG

### Fast & Painless Heart Surgery

#### Why choose Minimally Invasive Cardiac Surgery over Open Heart Surgery?

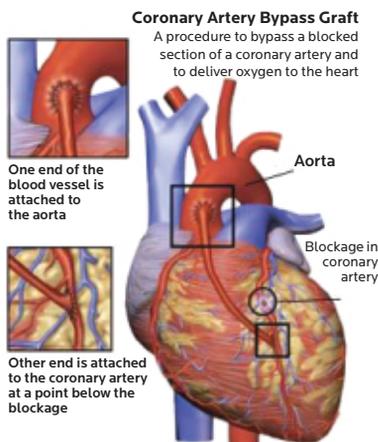
With Minimally Invasive Cardiac Surgery, your surgeon makes one or more small incisions in your ribs. Then, specialised surgical instruments along with a tiny camera are inserted through the incision. This method allows your surgeon to accurately maneuver the instruments and perform the procedure more precisely. Conventional Coronary Bypass Surgery is performed, splitting or cutting through the sternum or breastbone.

Minimally Invasive Cardiac Surgery is safe and has revolutionised the way cardiac surgery is performed throughout the world.

#### What are the benefits of Minimally Invasive Cardiac Surgery?

Minimally Invasive Surgery confers many advantages over standard approaches, derived largely from the reduced trauma to the chest wall tissues. The benefits of Minimally Invasive Cardiac Surgery include:

Smaller incisions n Smaller scars n Reduced infection risk  
Less blood loss n Less pain



### Further Advantages

**Shorter hospital stays:** Stays after minimally invasive operations are from 3 to 5 days, compared to 5 to 7 days for traditional sternotomy-based cardiac operations.

**Fewer physical restrictions:** Patients undergoing standard incision cardiac operations are restricted from driving an automobile or lifting objects weighing more than 5 pounds, while patients undergoing Minimally Invasive Cardiac Surgery are not subject to these restrictions.

**Shorter recovery time:** Recovery times after minimally invasive operations are from 2 to 4 weeks, compared to 6 to 8 weeks for standard sternotomy-based cardiac operations.



#### Q1 How do minimally invasive operations differ from conventional CABG?

Conventional Coronary Artery Bypass or CABG requires the sternum or breastbone to be cut into half. Recovery time for conventional bypass surgery is longer; up to 8 weeks as the split bones need time to heal. With MICS CABG, the operation is done through the side chest wall. No bones are cut and hence healing is faster. Healing is usually complete in 10 days.

#### Q2 Is it a pump supported or beating heart operation?

It is normally an off-pump or beating heart operation. Pump support may particularly be required when the heart is weak but the operation is still performed on the beating heart.

#### Q3 I smoke/am asthmatic. Is MICS CABG still an option for me?

Yes, it could be the ideal option for you. It's best for your surgeon to make that decision along with your respiratory therapist.

#### Q4 How fast will I recover from MICS CABG and get back to work?

Hospital stay is as short as 2 to 3 days and most of the patients get back to normal life and work in 10 days. (A bypass surgery requires 2 months to recover from.)

#### Q5 I am diabetic. Is MICS CABG suitable for me?

Yes, absolutely. You may be the perfect candidate for MICS as chances of infections are almost eliminated with the operation. The quality of your blood vessels will state whether you are suitable for this technique and your surgeon is the best judge.

#### Q6 Are MICS CABG and MIDCAB the same?

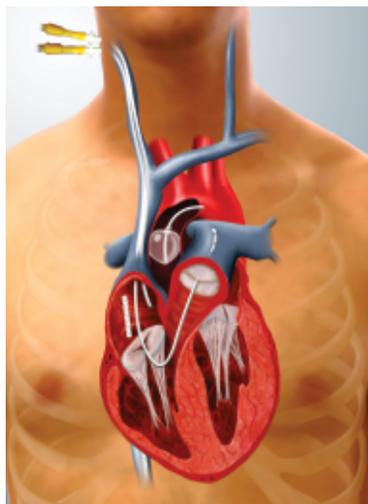
No, they aren't the same. MIDCAB is an old technique where just one or two vessels can be grafted. It's an incomplete operation and is no longer performed. MICS CABG is the latest, most efficient technique offered by modern science.

## Advanced TAVI Procedure

In western countries, TAVI has now become the most common go-to cardiac operation when it comes to Minimally Invasive Surgical procedures for valve replacement. With almost 95% success rate, TAVI is considered to be the gold standard treatment for older and frail patients suffering from aortic stenosis, who are otherwise advised against undergoing open heart surgery due to the high risks involved. The advanced technology of TAVI or Transcatheter Aortic Valve Replacement has given hope of a new life to these geriatric population suffering from vascular disease.

The heart has four valves - mitral valve and tricuspid valve control blood flow from the atria to the ventricles, while aortic valve and pulmonary valve control blood flow out of the ventricles. In short, the basic function of valves is to allow seamless flow of blood through the heart. Previously when any of those valves were dysfunctional, an open heart surgery used to be performed to replace them. Now with TAVI procedure, the valves can be substituted without opening the heart. This procedure is done through the leg artery via groin, where a catheter is passed all the way to the heart. By insertion of a prosthetic catheter through the circulatory system, the old valve is replaced with the new valve, which immediately starts working to regulate blood flow.

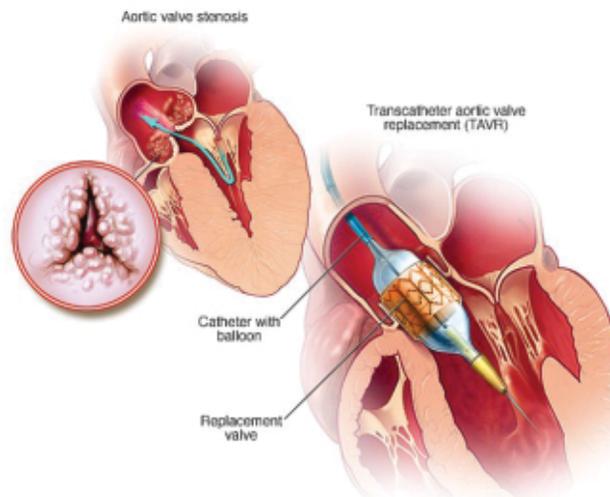
Open heart surgery is very risky for people over 50 years of age, who can't undergo the rigors of this operation. With overall technological advancement across the world, the mortality rate is decreasing quickly and people are living longer these days, especially in western countries. As older people are more prone to succumbing to such cardiovascular disorders, they are also at risk when open heart surgery is performed on them. The most common symptoms patients of aortic stenosis face are chest pains, extreme breathlessness if they exert themselves, and possible fainting spells. After going through complete pre-surgery check-ups including CT scan, X-Ray and blood test, the expert physicians recommend TAVI, which has now been proven to be one of the most cutting-edge surgical treatments by medical communities across the world. Although TAVI remains relatively expensive and only a few people can afford it, its



benefits are incomparable.

"TAVI is safe and more effective than open heart surgery as there is no blood loss, much less risk of infection and fast recovery is possible. In India, close to 200 surgeries have been done so far, whereas in eastern India hardly 1-2 have been done till now. At CK Birla Hospitals - BM Birla Heart Research Centre, we offer the most cutting-edge and reliable technology to perform this surgery along with complete post-surgical care. TAVI is undoubtedly more suitable for most of the patients suffering from aortic-stenosis" says Dr. Anjan Siotia, Department of Cardiology, CK Birla Hospitals - BM Birla Heart Research Centre. Dr. Siotia adds the following points to be kept in mind while patients choose to go for TAVI procedure:

- Always opt for a renowned physician who has hands-on knowledge and expertise on TAVI surgery
- Verify the credibility of the hospital and its entire infrastructure
- Go through a proper pre-operative risk evaluation
- Check your comorbidities
- Follow your post-surgery routine and therapy religiously. Go for regular check-ups as recommended by your doctor



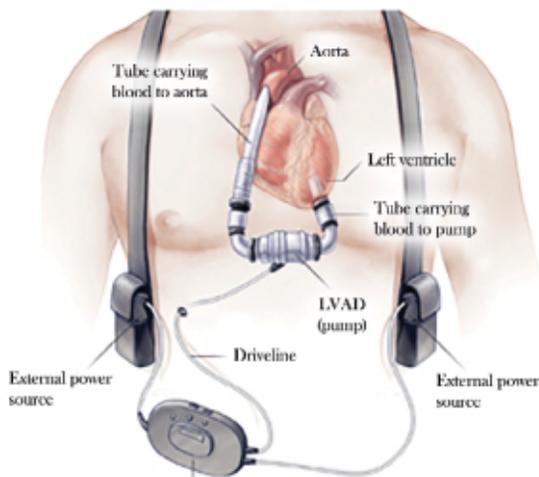
Over the years, TAVI has definitely emerged to be a life-saving surgery to numerous elderly patients across the world. In eastern India, CK Birla Hospitals - BM Birla Heart Research Centre with its highly skilled doctors, world-class infrastructure, and extensive successful implementation of their research; is finally offering this progressive surgical technique for a much better quality of life.

## LVAD

LVAD is a surgically implanted mechanical pump that is attached to the heart. LVAD is different from an artificial heart. An artificial heart replaces the failing heart completely, whereas LVAD works with the heart to help it pump more blood with less work. It does this by continuously taking blood from the left ventricle and moving it to the aorta, which then delivers oxygen-rich blood throughout the body.



The LVAD has both internal and external components. The actual pump sits on or next to your heart's left ventricle with a tube attached that routes the blood to your aorta. A cable called driveline extends from the pump, out through the skin, and connects the pump to a controller and power sources worn outside the body



If a patient has reached a stage of advanced heart failure where the heart is no longer able to pump enough blood to meet body's needs, then the doctor may recommend LVAD (Left Ventricular

Assist Device) implant surgery. Today's LVADs are used in three different ways:

- n When an LVAD is implanted in a patient waiting for a heart transplant, it's called Bridge to Transplant. The patient's LVAD may remain in place for several years until a heart donor becomes available for transplant.
- n If a patient is not eligible for a heart transplant, an LVAD may be implanted as a permanent solution. This is called Destination Therapy and is becoming more and more common as LVAD technology and the quality of life it offers continue to improve.
- n An LVAD that is implanted for temporary heart failure is called Bridge to Recovery. In rare circumstances, a heart may recover its strength after being given time to "rest" with the help of an LVAD. In the vast majority of cases, however, advanced heart failure is a permanent and irreversible condition.

## LVAD Technology

There are several different LVAD models available today. Each has unique engineering characteristics and different external equipment, but they all serve the same function. Today's LVADs are quite different from earlier models, which were larger, noisier and less durable, with bulkier power sources.



As LVAD technology continues to improve, so does the quality and quantity of life for LVAD patients. Today's LVAD patients have at least an 85% one-year survival rate and can enjoy fulfilling lives and in many cases even return to work. By contrast, advanced heart failure with medical therapy alone is known to have a 25–50% one-year survival rate.