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## Redefining cardiac care

The Times of India, in collaboration with Apollo Hospitals and Apollo 24x7, organised a roundtable conference in Indore with experienced cardiac surgeons to discuss and explore the latest advancements in cardiac care

Heart disease remains one of the leading causes of death worldwide, and advancements in cardiac surgery continue to reshape the landscape of treatment. Traditional open-heart surgeries, though effective, often involve extended recovery times, higher risks, and increased post-operative discomfort. With advancements in technology, high-definition imaging, and precision instruments, cardiac procedures are now becoming more efficient and accessible.

Against this backdrop, The Times of India recently organised a roundtable conference in association with Apollo Hospitals and Apollo24x7, with a team of leading cardiac surgeons from the city to discuss the latest advancements in cardiac care. The health experts on the panel also discussed about the advancements, challenges, and future of Minimally Invasive Cardiac Surgery, particularly in the context of multiple grafting procedures such as Coronary Artery Bypass Grafting (CABG). The panellists included Dr. M.M. Yusuf, Dr. Kshitij Dubey, Dr. Vikas Gupta, and Dr. Sushil Jain, who shared their experiences and breakthroughs in this evolving field.

The discussion provided valuable insights into how new technology reshapes patient care, reduces hospital stays, and improves surgical outcomes.

"MICS refers to a range of procedures performed without the need for a full sternotomy (cutting through the breastbone). Instead, surgeons operate through small incisions, often between the ribs, using specialized instruments and



with or without robotic assistance. The primary goal of MICS is to minimize surgical trauma, reduce recovery time, and improve patient outcomes. Minimally Invasive Cardiac Surgery is the future. It allows us to perform complex procedures with greater precision while ensuring patients recover faster," informed Dr. Yusuf.

Her father added, "Traditionally,

cardiac surgeries require sternotomy, which involves opening the chest to access the heart. However, with technological advancements, surgeons can now perform complex procedures with minuscule incisions, robotic assistance, and high-definition cameras."

"Minimally Invasive Cardiac Surgery is no longer an experimental approach—it is now a well-established,

safe, and effective alternative to traditional surgery. With the right expertise and technology, we can perform complex procedures with minimal trauma to the patient," added Dr. Yusuf.

During the round table conference, Dr Yusuf highlighted some of the key procedures performed using MICS including minimally invasive coronary artery bypass grafting (MICS-CABG), heart valve repair and replacement, atrial septal defect (ASD) closure and robotic-assisted coronary artery bypass (CABG). Dr. Yusuf emphasised that 80-90% of coronary artery bypass grafting (CABG) surgeries can now be performed using MICS techniques.

During the discussions the experts revealed that traditional open-heart surgeries, involve large incisions and significant post-operative pain. And there are several key benefits that are driving the shift towards MICS:

Dr. Kshitij Dubey, chief cardiac surgeon at Apollo Hospitals, stated,

"With MICS, instead of an 8-10 inch incision on the chest, we make a 2-3 inch incision. This significantly reduces blood loss and trauma."

Dr. Kshitij Dubey added, "Patients undergoing MICS typically recover within two to three weeks, compared to the six to eight weeks required for traditional surgery." Dr. Sushil Jain, highlighted, "Most of our MICS patients are discharged within four to five days post-surgery. They can resume normal activities much sooner, making it a game-changer, especially for younger and working individuals."

According to Dr Jain, "Since MICS does not require breaking the sternum, there is a lower risk of infections, bleeding, and complications. This is particularly beneficial for diabetic and elderly patients." He further added, "Patients experience minimal post-surgical pain due to the smaller incisions. Pain management becomes more manageable, reducing dependency on painkillers. Many patients, especially young individuals, benefit from

avoiding a large chest scar. MICS leaves only small, less noticeable scars. Studies show better long-term survival rates and reduced re-hospitalization."

"Gone are the days when cardiac surgery meant long hospital stays and painful recoveries. Today, we can perform life-saving procedures with minimal disruption to a patient's daily life," added Dr Kshitij, a specialist in complex coronary interventions.

### GUARDING YOUR HEART

The discussion also touched upon what it requires for a successful Minimally Invasive Cardiac Surgery (MICS) to take place. It was highlighted by the health experts on the panel that several key elements must align, ensuring optimal precision, safety, and efficiency in every procedure which will ultimately lead to improved patient outcomes and a transformative shift in modern cardiac care. Dr. Vikas Gupta, a specialist in cardiac anaesthesiology, stated, "Minimally invasive surgery

### PULSE OF GOOD HEALTH

→ Dr. Vikas Gupta, a specialist in cardiac anaesthesiology stated, "Minimally invasive surgery is not just about using small incisions; it requires an experienced team trained in robotic assistance, endoscopic visualisation, micro-instrument handling, and single lung ventilation."

→ Dr. Kshitij elaborated, "Previously, single-vessel bypasses were preferred in minimally invasive procedures, but with improvements in instrumentation and grafting techniques, it's now possible to perform multiple grafts with minimal invasion."

→ Dr. Yusuf concluded, "The goal of cardiac surgery is not just to extend life but to improve its quality. As research continues and technology advances, minimally invasive cardiac surgery will soon be a boon for cardiac care, transforming the way we approach heart disease."

is not just about using small incisions; it requires an experienced team to handle the procedure."

Dr. Yusuf further emphasised, "The key to success in MICS is proper patient selection. Not all patients are ideal candidates. A thorough evaluation is necessary to ensure safety and effectiveness."

Dr. Sushil spoke about pre-operative planning and post-operative care. "Planning is the most important part of MICS. Today, advanced imaging techniques are used to create a precise surgical roadmap before making incisions," informed Dr. Sushil.

### NEW VISTAS IN CARDIAC CARE

Another important point that was highlighted by health experts during the conference was one of MICS's biggest concern which is the ability to perform multiple grafting—a critical aspect of Coronary Artery Bypass Surgery (CABG), where multiple arteries need bypassing.

"Coronary artery disease (CAD) often affects multiple arteries, requiring multiple bypass grafts. Multiple arterial grafting was traditionally challenging due to limited access through small incisions. However, advancements in surgical techniques and robotic systems have made it possible," said Dr Yusuf.

Dr. Kshitij elaborated on this point, "Previously, single-vessel bypasses were preferred in minimally invasive procedures, but with improvements in instrumentation and grafting techniques, we can now perform multiple grafts with minimal invasion."

"With advancements in technologies and the efforts of cardiac surgeons, the landscape of heart surgery is transforming, ensuring a healthier tomorrow for millions. The roundtable discussion made it clear that Minimally Invasive Cardiac Surgery (MICS) is the future of heart surgery. With multiple grafting techniques and faster recovery times, MICS provides patients with safer and more cost-effective treatment options. MICS combined with endovascular harvesting offers a cost-effective alternative to robotic surgery, delivering equally safe and effective outcomes while reducing expenses, minimizing surgical trauma, and ensuring optimal patient recovery and treatment precision," asserted Dr. Kshitij.

Dr. Yusuf said, "The goal of cardiac surgery is not just to extend life but to improve its quality. MICS is helping achieve both. As research continues and technology advances, MICS is proving a boon for the patients."