

Minimally invasive cardiac surgery offers quicker patient recovery

ETMC CARDIOLOGY INSTITUTE

When you have a cardiac patient who may need a heart operation, you owe it to yourself and to your patient to investigate the minimally invasive cardiac surgery (MICS) being done at ETMC Tyler by heart surgeon Neelan Doolabh, MD, of Turner Cardiovascular Associates.

"We've been extremely pleased with this operation," Dr. Doolabh said. "Most of our patients stay three days in the hospital and are back to full activity within two weeks."

Traditional open-heart surgery involves making a long incision, opening the patient's sternum and spreading it wide to gain access to the heart, then stopping the heart and routing the patient's blood through a pump during the procedure.

With MICS, surgery is done through an incision of about 1¾ inches, and no bones are broken. Instead of stopping the heart, the surgical team cools the heart and keeps it fibrillating

or quivering, continuing the flow of blood. The procedure minimizes the patient's loss of blood.

MICS techniques are flexible and adaptable for many surgical procedures, Dr. Doolabh said. "We can do any operation that we can do through the chest. We can do complex repairs or replacements."

Results are comparable to those of traditional surgery, he said.

"The proof is in the pudding. These patients do very well," according to Dr. Doolabh.

Dr. Doolabh discussed the benefits of the MICS technique.

Quicker recovery

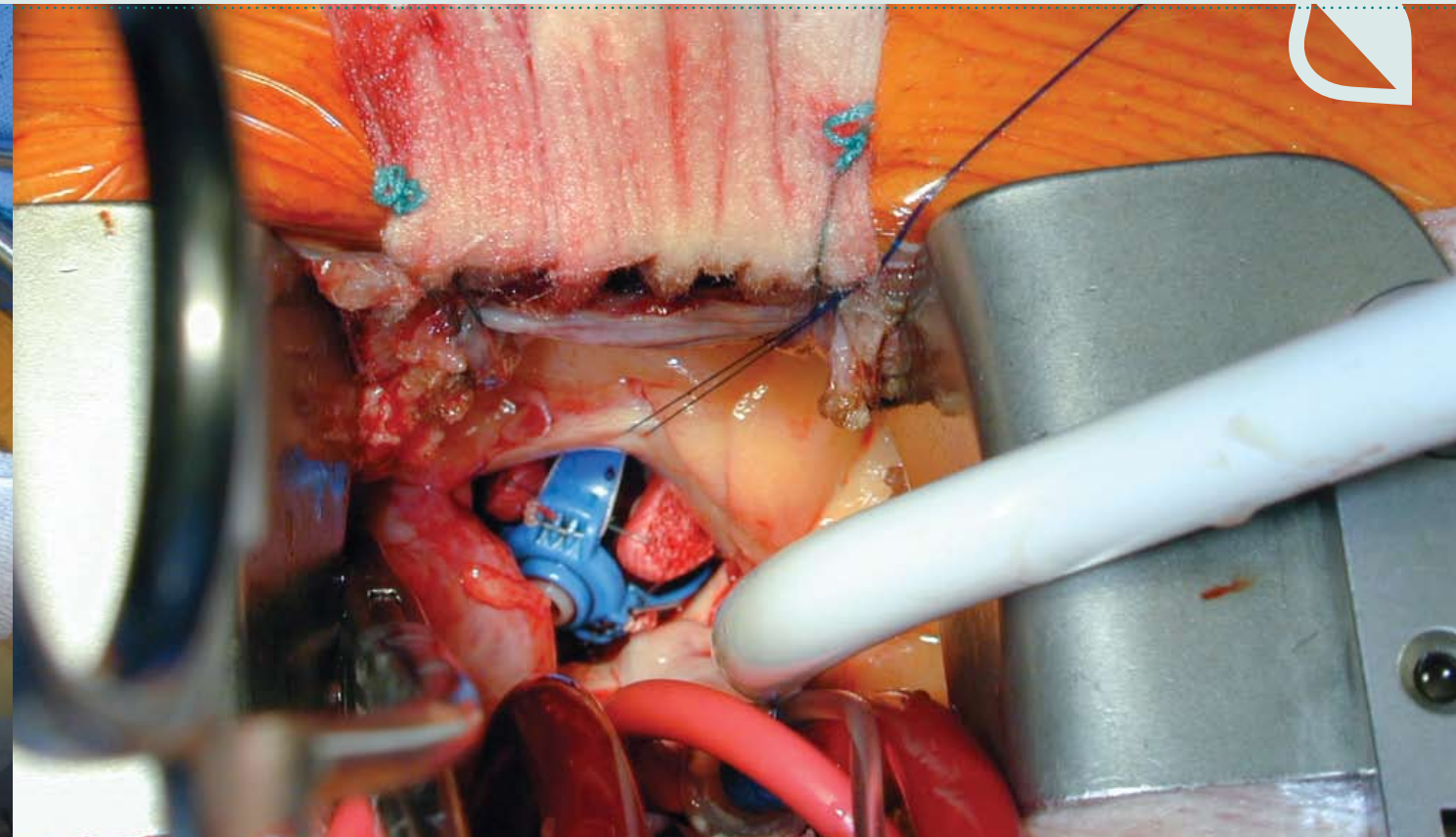
With MICS, the patient usually spends three days in the hospital and can return to full normal activities after two weeks. Recovery is quick because the incision is small and no bones have been broken.

After traditional open-heart surgery, the patient must recover from a large incision and the splitting of the sternum.

"The biggest limitation of this procedure is the healing of the breastbone after surgery," Dr. Doolabh said. "We rely on our patients for a period of six weeks to two months after surgery not to use their arms in order to allow their breastbone to fuse and stabilize. As you can imagine, this provides a significant limitation on their return to activity and their return to work."

"A lot of our patients are elderly, and they need their hands to help steady themselves when walking upstairs or doing basic things, so it (MICS) is a major, major advantage," said Dr. Doolabh.

It's also difficult for overweight patients: "If you're a larger patient, you may need your hands to get out of bed, help yourself get up the stairs, things of that nature. After the traditional



operation, if you utilize your hands, you can break open your breastbone. So for those patients we do everything we can to do this operation through the chest."

Less blood loss

By not stopping the heart and not using a bypass pump, as well as by making a smaller incision, the MICS method decreases the blood loss for the patient.



Dr. Doolabh said that in a mitral valve replacement surgery, for instance, the typical amount of blood lost was only 150 cc.

Blood flow to the heart continues throughout the operation, Dr. Doolabh noted, which helps keep the organ healthy during the trauma of surgery.

While the heart is fibrillating, the patient's body temperature typically is cooled from 37°C to 27°C, he explained. This decreases the oxygen demand by the patient's organs.

Improved cosmetics and patient satisfaction

The less-invasive method means a smaller incision, a smaller scar, a decreased chance of infection and less pain during healing. Although infections are rare in modern cardiac surgery, an infection in the breastbone can be particularly serious, Dr. Doolabh noted.

Another consideration: It's easier to persuade a patient to have needed surgery when it means a 2-inch incision rather than opening the sternum.

"The sternotomy is one of the biggest reasons patients delay a needed (procedure)," Dr. Doolabh said. Also, if further surgery is required later, that becomes easier when the initial procedure was done via the MICS method.

Who is a candidate for MICS techniques? Dr. Doolabh said elderly, overweight and sick patients are often good candidates.

"We have no limitations based on age," he said, adding: "The sicker the patient, the bigger the benefit."

However, he said, patients with significant coronary artery disease or peripheral vascular disease may need to have surgery done through the traditional bypass method.