



## Robotic Surgery

A surgeon has become the first to use a robot during heart surgery to repair a mitral valve. The technique of repair used is called the “*American Correction*”. The surgeon used a *daVinci* robot to repair the mitral valve of a 62-year-old man.

Previously, the procedure involved opening the chest and a long recovery for patients. “With (the new) technique, patients suffer fewer complications and return to their normal lives much quicker,” said a physician. “We have performed the *American Correction* for years ... now we adapted the robot to our technique,” he said.

It took seven months of training to be able to perform this surgery with a robot. Instead of opening up the chest, surgeons made four small incisions along the right side of the chest to insert small surgical instruments attached to adjustable robotic arms. Attached to one of the arms is a camera that sends images back to the doctors who then operate instruments attached to the arms.

The system’s design allows a surgeon to operate from a seated position at the console with eyes and hands positioned in line with the instruments. To move the instruments the surgeon simply moves his/her hands.

Physicians say that the robot is ideal for valve repair surgery because it gives the surgeon a 3-D, 10 times magnified view of the operating field and provides an excellent look at the delicate tissue and organs.

The surgery actually takes longer than



normal but there are more benefits for the patient, say scientists.

“Because we are not opening the chest, there is less scarring, fewer wound complications, and a much quicker recovery time,” said a doctor.

The mitral valve is the inflow valve for the left ventricle, the main pumping chamber of the heart. Blood flows from the lungs, across the valve and into the left ventricle. A repair is conducted to treat leakage or narrowing of the valve. This is often better than a replacement because it is considered more durable, say doctors. In some cases, the valve is replaced with an artificial valve.

Studies show that the survival rates are better with repairs and that there is reduced risk of strokes or infection. The original technique for valve repair is still widely used but has only a 60 percent success rate.

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