Dr. Ochsner discusses matters of the heart

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"Every major defect" can be corrected due to advances of last three decades

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No field has advanced as much in the past 30 years as heart surgery, according to Dr. John L. Ochsner of New Orleans, unless it has been transportation, which put man on the moon.

When he was an intern and resident during the late 1950s, adult heart disease was untreatable with surgery. Now there are coronary artery bypass, balloon angioplasty, valve replacements, human heart transplants and mechanical hearts.

Advances continue, including experiments using a laser beam to destroy buildup of plaque blocking coronary arteries. Ochsner told local media representatives Tuesday at a luncheon at Boudreaux's.

Lasers "will probably put me out of business," said the cardiovascular surgeon, who is chairman of Ochsner Medical Institutions' department of surgery.

The laser experiments use balloon angioplasty to smooth the sides of the artery after the laser beam destroys the obstruction.

Balloon angioplasty is used now to remove blockages by passing a balloon at the tip of a catheter through blood vessels. The balloon is inflated at the site of the blockage, relieving the blockage as it expands. It's an example of how techniques are refined with practice. Balloon angioplasty was initially limited to one vessel to the heart, but can now be done on all of them.

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How long the results last remains unknown, Ochsner said. At present the recurrence rate is 30 percent, but the procedure can be done again with a reduced recurrence rate.

It has been learned that vein grafts made to bypass blockages in coronary arteries develop hardening of the arteries after about 10 years in around half of the patients. Symptoms of heart disease return.

However, when the internal mammary artery is sewn onto the coronary artery, hardening of the arteries does not develop. Ochsner is convinced this will replace vein grafts as time goes on.

"When you look at recurrence rate, this is the way to go," he said.

Heart surgery began with correcting congenital heart defects and today every major defect can be corrected, he said. In those early operations, the child's body temperature was lowered, allowing surgeons only 4 to 10 minutes to work in the heart.

The heart-lung machine, first used in 1952, gave surgeons more time. Mortality was about 30 percent from 1952 to 1960. In the last five to six years it has dropped to 1 to 2 percent, he said.

The next group of heart patients who were surgically treated had valve problems. Many of those patients suffered from rheumatic fever, but antibiotics can cure that today. New interest in valve replacement is seen now because of degenerative valve disease, but as yet human beings "cannot make a valve as good as God," Ochsner said.

Replacement valves are improving, though, and a perfect one will eventually be available, he said.

Approximately 5,000 people have heart attacks each day, he said. Although around 700,000 die from heart disease each year in this country, good treatment keeps many heart attack victims alive.

Some, though, are left with badly damaged hearts, or "end-stage coronary artery disease." For these patients, two surgical treatments are available. One is the mechanical heart, which is used today only as a bridge to a heart transplant.

"It is a procedure done before its time," but much has been learned from it, Ochsner said. "With time, there will be a place for a mechanical heart," but he does not expect to see the day when it will serve as a long-term replacement.

The other option is human heart transplants, and Ochsner has done 11 of the 12 performed in Louisiana. The day Dr. Christian Barnard performed the first one in South Africa, Dec. 3, 1967, lives in the memory of heart surgeons, he said.

The events surrounding the first transplant happened much like those of mechanical heart surgery two years ago; as one problem was solved, another developed, he said.

A major drawback was the lack of drugs to treat rejection, which are now available. Another was that rejection could not be diagnosed. Now it's possible to take a daily biopsy, if necessary, of the inside of the heart to know precisely when the heart is in danger of being rejected. This prevents overtreatment if rejection is not occurring.

Fifteen years ago the one-year survival rate for heart transplant patients was 20 percent. It is now approaching 80 percent, Ochsner said, and the longer the patient lives with the transplant the less danger there is of rejection. The most critical time is the first two weeks, during which most show signs of rejection which is treatable, he said.

A significant number of transplanted hearts grow new nerves, which are severed, of course, when the heart is removed from the donor.