

SURGERY

Survive Valve Operations

More and more heart and vascular patients live after operations performed because doctors are more aware of improved techniques than ever before—By Faye Marley

► MORE HEART and vascular patients are surviving operations today because their surgeons are learning more each year, said Dr. Michael E. DeBakey, chairman of the department of surgery at Baylor University, Houston, Texas.

The American College of Surgeons is less vocal in its expressed opposition to the heart, cancer and stroke program than the American Medical Association, Dr. DeBakey told SCIENCE SERVICE.

But he believes that all the doctors and surgeons will support it. He was chairman of the President's commission to report on heart, cancer and stroke, and expects the new regional centers to be successful all over the United States.

He reported to the Clinical Congress of the American College of Surgeons in Atlantic City, N.J., the findings of a study of more than 600 patients whose high blood pressure was so severe that kidney artery, or renovascular operations were performed. Of these 600, 80% are alive today.

A long-term follow-up of 421 of these patients from age one and a half to seven years, showed that many have survived at least five years.

About 20% of the patients had other abnormalities of the blood vessels, including the two neck arteries to the brain, the carotid arteries.

In the 600 cases of renal artery repair a large percentage regained normal blood pressure without the need for drugs.

The patients were referred to Dr. DeBakey by physicians who were dissatisfied with their progress using drugs. The drugs may have helped for a time, but continued use had produced side effects that were undesirable.

The relationship of high blood pressure to the kidney arteries has long been known, but it was 1956 before Dr. DeBakey did his first renal artery surgery.

The idea originated from his experience with other arterial diseases, Dr. DeBakey reminisced.

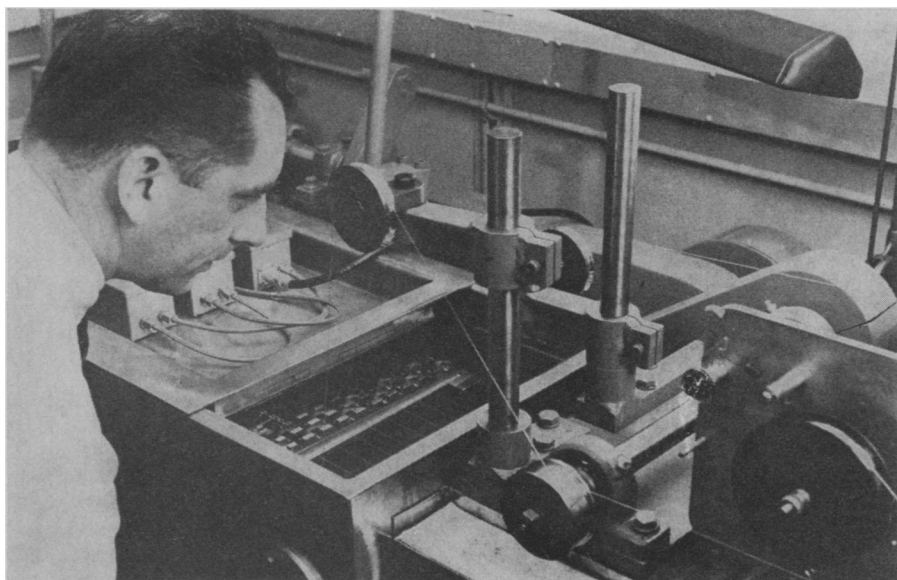
"I reasoned that if you can restore function to a leg where the artery was blocked, you should be able to restore the function of organs as well."

His first operation of this kind was on a stroke patient in 1953, who had had repeated small strokes.

Later Dr. DeBakey turned his attention to the kidney because kidneys were being removed unnecessarily.

So successful has Dr. DeBakey's surgery become that the Duke of Windsor traveled to Texas to have his abdominal aorta repaired by the Baylor professor. One of the DeBakey patients has survived six years following the same operation. The surgeon said that his success has improved with practice. In 1953 or 1954 he had a death rate of 17% of his abdominal aorta patients. Now it is close to one percent, which is about par for most surgery.

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Bell Telephone Laboratories

ULTRASOUND PRODUCES SMOOTH WIRE—Edward Fuchs of Bell Telephone Laboratories, New York, adjusts the speed on a new wire drawing machine that he helped design. The machine produces wire with a very smooth surface by drawing it through an ultrasonically agitated liquid.

Burn Treatment Improved

► BURN PATIENTS have a better chance of survival than they did two years ago, a panel of experts told the Clinical Congress of the American College of Surgeons in Atlantic City, N.J.

Col. John A. Moncrief of the U.S. Army Medical Corps, Fort Sam Houston, Texas, has found this improvement partly due to the treatment procedure which involves spreading a cream known as sulfamylon on the burned area immediately following the usual cleansing of the burn wound.

Dr. Moncrief emphasized shaving as part of the cleansing procedure. Any hair in a burn wound can cause trouble, he said. Sulfamylon is made by the Winthrop Laboratories.

Dr. Carl A. Moyer of Washington University, St. Louis, Mo., uses silver nitrate to cover the wound following the cleansing procedure.

However, neither of these medications is sufficient to enable badly burned persons to recover.

"Meticulous attention to detail, including the control of invasive infections, is necessary if a burn patient is to survive," Dr. Moyer said. "Hard work by an entire cadre is required. This means one nurse, with relief, around the clock; ward helpers and orderlies; and a physician available within five minutes. Blood tests three times a day and practical biochemists are needed also."

Pseudomonas poses the most dangerous problem. It causes invasive infections that can be fatal. But even if pseudomonas is excluded, other organisms will take its place, Dr. Moncrief warned.

Dr. Moyer, who was moderator of the panel, said that most hospitals in the U.S. are using old treatment methods for burns. They either expose the patient to the air after grafting or use a "standard" occlusive dressing, made up of a lot of gauze wrapped around the burned parts.

He said that the silver nitrate he uses for treatment has one-twentieth the concentration used 50 years ago. His method reduces the number of bacteria and does not prevent skin growth.

"The environmental" needs of each burn patient are different, Dr. Fred T. Caldwell of Syracuse, N.Y., said. The rate of water vapor loss is enormous, and this loss must be controlled.

Dr. Sanford M. Rosenthal of the U.S. Public Health Service, said that civilians can take care of themselves until they can get to a doctor by drinking water in which salt and soda have been dissolved to maintain their fluid balance. Dr. Rosenthal's work with experimental mice in the 1940's is now applicable to humans. He was the first person to approach the treatment of shock with fluid treatment.

"Saline solutions by mouth are almost as effective as those given intravenously," Dr. Rosenthal told SCIENCE SERVICE.

Dr. William W. Monafa of Washington University, St. Louis, who works with Dr. Moyer, also took part in the panel discussion.

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