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## City's 1st Jarvik heart implanted

By Jeffery Fraser

The Pittsburgh Press

Thomas Gaidosh, Pittsburgh's first artificial heart recipient, suffered minor bleeding problems this morning and was returned to surgery at Presbyterian-University Hospital.

Gaidosh, a 47-year-old retired factory worker who lives on Cherry Street in Sutersville, Westmoreland County, received the Jarvik-7 artificial heart yesterday as an emergency measure to keep him alive until a donor is found.

He remained in critical condition in the intensive care unit of the hospital following the second operation, which began at 5 a.m. and lasted about one hour.

Dr. Bartley Griffith, leader of the surgical team, said the second operation was necessary because of an "unacceptable accumulation of blood" in the patient's

chest. Thomas Chakurda, hospital spokesman, described the bleeding problem as minor, but offered no further details.

Surgeons removed Gaidosh's diseased heart and implanted the mechanical device in a six-hour operation which began around 4 p.m. yesterday. Hospital officials said the implant was operating "beautifully."

Gaidosh had been transferred to Presbyterian four weeks ago from West Penn Hospital. He had been waiting 2½ weeks for a heart transplant before he became gravely ill yesterday.

He suffered from idiopathic cardiomyopathy, a virus of unknown origin which attacks and weakens the heart muscles. His condition deteriorated yesterday and doctors did not expect him to survive the day without a new heart, a hospital spokesman said.

The artificial heart was implanted so Gaidosh could survive long enough to undergo transplant surgery,

which doctors consider to be the best treatment for irreversible heart disease.

As soon as an acceptable donor heart becomes available, doctors would immediately transplant the natural organ into Gaidosh, Chakurda said.

Doctors were not available for comment following the implant. Assisting Griffith in surgery were Drs. Robert Hardesty and Alfredo Trento, all of whom are members of the University of Pittsburgh School of Medicine faculty. After the implant, members of the surgical team took part in a heart transplant at the hospital, sources reported.

The implant marks the first time an artificial heart was used by a Pittsburgh hospital.

Last Friday, surgeons at the Hershey Medical Center implanted a mechanical heart in Anthony Mandia, a 44-year-old Philadelphia recreation department worker. He is reported to be in critical but stable condition as he

begins his second week with an artificial heart developed at Pennsylvania State University.

Mandia's mechanical heart, which is similar to the Jarvik-7, is also intended to be temporary. Both devices are powered by air, which is pumped into the polyurethane heart chambers through hoses that penetrate the patient's chest.

Gaidosh was described as a large man who stands about 6 feet, 5 inches tall and at times weighed as much as 220 pounds. Because of his size, doctors said he would not be competing with Mandia for the same type of donor heart.

The Jarvik-7 and Penn State heart can be used as permanent life-support systems, if necessary.

About 2½ years ago, Gaidosh's heart condition forced him to take a disability retirement from Enan-

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Products and Plating Co. in McKeesport, where he had worked for 27 years, said Pat O'Neill, one of his former co-workers in the shipping department.

"He was off work a couple of different times because of his heart problems," O'Neill said. "He couldn't lift anything and he couldn't catch his breath if he walked too much."

The patient's wife, Dolores, and children, Thomas and Pamela, both in their 20s, were sequestered in the hospital last night.

He is a member of the St. Charles Catholic Church in Sutersville, a small rural town of about 950 people.

A neighbor, Albert Dunch, said Gaidosh is a quiet family man who enjoys softball and working in his backyard. "He's a nice guy. He's quiet, considerate and always concerned about his neighbors."

Gaidosh used to coach and play softball but was forced to quit because of his illness. "He tires very easily and hasn't been able to do much lately," Dunch said.

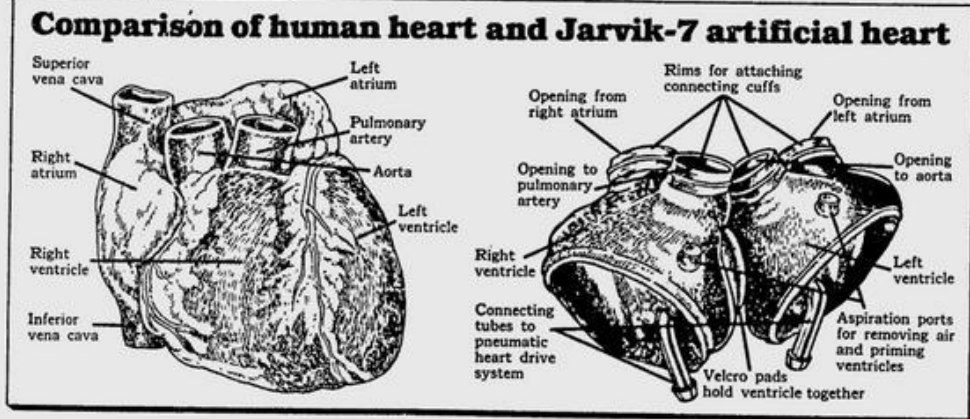
Presbyterian's Board of Trustees approved the use of the Jarvik-7 in July. The following month, the hospital received the approval of the U.S. Food and Drug Administration to perform up to five implants on critically ill transplant patients.

The number of heart transplants has rapidly increased with the success of cyclosporine, an anti-rejection drug that helps the body accept donor organs. The result has been a rising demand for donor organs and a longer waiting period for transplant candidates.

Patients who waited an average of five days for a donor a few years ago are now waiting two weeks for the lifesaving surgery. Many don't survive.

"There comes a time when a patient is too sick for a heart transplant," Griffith said in an April interview. "The kidneys are shut down, the liver no longer functions and although the patient might not be dead, nothing can be done at that point to bring them back — not even a new heart."

Griffith said the hospital would implant the artificial heart in a



Al Parson/The Pittsburgh Press

transplant candidate whose natural heart can no longer support other vital organs. "Our point is to catch those patients before they go over the edge."

He estimated that as many as 10 heart transplant candidates died last year at the hospital while waiting for a donor.

Presbyterian, one of the nation's leading transplant hospitals, performed 50 heart transplants last year. An estimated 150 patients nationwide are waiting for heart transplants.

The Presbyterian surgical team was trained to implant the Jarvik-7 in April by the developer, Dr. Robert Jarvik, and others at the University of Utah Medical Center, where the first Jarvik heart was implanted December 1962 in Barney Clark.

At least for the first operation, Presbyterian is not expected to charge the patient for implanting the Jarvik-7, or for the device itself, which costs \$15,000.

Other costs usually paid by transplant patients, such as intensive care fees, will not be underwritten by the

hospital.

A \$70,000 deposit is usually required of each patient who gets a heart transplant at the hospital. The transplant operation costs between \$70,000 and \$95,000, and surgeon's fees and other services could add another \$20,000 to the bill.

The artificial heart has been implanted 11 times in humans, five times as a permanent replacement of the natural heart and six times as a temporary bridge to transplantation.

Clark, a 61-year-old Seattle dentist, survived 112 days with a Jarvik-7, which was used to permanently replace his natural heart.

William Schroeder, who has survived the longest with an artificial heart, received a Jarvik heart 11 months ago at the Humana Hospital Audubon, Louisville, Ky.

In August, the Jarvik-7 was successfully used by University of Arizona surgeons to keep 25-year-old Michael Drummond alive for more than a week until a donor heart was found for him. Drummond, a Phoenix food store worker, is reported to

be recovering well with his new heart.

In 1969, Dr. Denton Cooley of Houston became the first surgeon to implant a stopgap artificial heart in a dying patient. The 47-year-old patient survived 64 hours with the mechanical heart but died 32 hours after a donor heart was transplanted into his chest.

Nearly all artificial heart patients suffered health complications following surgery. Strokes and bleeding have been the most common.

Several recipients, including Drummond and Schroeder, suffered strokes that doctors believe may have been caused by tiny blood clots that broke free from around the mechanical heart's valves and traveled to the brain.

Anti-coagulants are commonly used to reduce clotting, but in some cases these drugs have caused excessive bleeding.

To control clotting in Mandia's heart, the Hershey surgical team has been using aspirin and Dextran, which makes blood components "less sticky," said Dr. John Burside, a

spokesman for the hospital.

Clinical trials of the Penn State heart will be expanded to six more medical centers around the country and, although Allegheny General Hospital has been invited to participate, a hospital spokeswoman said "no decision has been made."

Said Dr. George Magovern, AGH's chief of surgery and a leading researcher in artificial hearts:

"I have no intention of using the Penn State device in a total (heart) transplant. If we decide to join the project, I would probably consider using it only as a device to assist a (damaged portion) of the heart."

In February, Magovern made medical history when he used two plastic pumps to keep a 60-year-old Pittsburgh doctor alive for five days until his own heart resumed beating.

If he used the Penn State heart, it would be for this type of purpose, he said.

(Jeffery Fraser is The Pittsburgh Press technology writer. Staff writer Janet Williams and medical/science writer Steve Tvedt also contributed to this story.)