

Transplant patient had chest organs in opposite positions

August 7 2009, By John Fauber

For much of his life, Jack Eigel endured ribbing about his heart being in the wrong place. But the jokes stopped early Tuesday when doctors performed an extremely rare and complicated heart transplant.

Eigel, 53, was born with an unusual condition in which the organs in his chest are reversed, leaving his heart on the right side.

While that's normally a benign defect, Eigel needed a transplant because his heart was failing for reasons unrelated to the condition, known as situs inversus.

Beginning about 1 a.m. Tuesday, doctors at the University of Wisconsin Hospital in Madison removed his right-side heart, re-engineered veins and arteries of a normal left-side donor heart and implanted it so that is now is pumping on Eigel's left side.

It is believed to be the first time such an operation was performed in Wisconsin and probably is done only once every four or five years in the U.S.

Situs inversus is found in about one in 10,000 people. About 2,500 heart transplants are done each year in the U.S.

Because the condition often causes no symptoms, it may not be discovered until a person has a chest X-ray.

"It definitely was a very weird experience to open his chest and see everything on the wrong side," said UW [transplant surgeon](#) Niloo Edwards. "Everything was not just reversed but it was mirrored in the opposite direction."

Edwards, chairman of cardiothoracic surgery at UW, compared the operation to attempting to put the inside of a car with a left-side steering wheel into the shell of a car with a right-side steering wheel. Another way to describe it was like trying to write your name on a piece of paper while watching the reflection in a mirror.

The biggest challenge is connecting the two main veins bringing blood back to the heart, said Leonard Bailey, a heart surgeon at Loma Linda University and Children's Hospital in California. The vessels run on opposite sides of each heart, normal and situs inversus.

"Even though it is more challenging for the surgeon, it shouldn't be overwhelming," said Bailey, who has done the operation several times on children. "You make room for it."

Additional work also has to be done to get the aorta and pulmonary artery to line up.

All of that would not be necessary if a donor heart from someone with the same condition could be found.

But, said UW's Edwards, "I haven't seen a donor with it in 20 years."

Edwards said he momentarily considered performing the operation from the opposite side of the operating table, but decided against it.

The operation on Eigel lasted from about 1 a.m. Tuesday to about 6 a.m., an hour or so longer than normal.

Little information was released about where the [donor heart](#) came from, although it was donated by another man from Wisconsin.

Late Tuesday afternoon, Eigel was conscious and was recuperating in the transplant recovery wing at UW Hospital.

Three years ago, Eigel had a cardiac arrest. He recovered, but in February 2008 he started feeling worse. The possibility of a [heart transplant](#) first was brought up by doctors at Froedtert Hospital in May 2005.

Eigel, who lives in Wauwatosa, originally was scheduled to undergo the transplant at Froedtert.

But his heart failure worsened and he was encouraged to get admitted at UW Hospital so he could be put on the waiting list for an organ donation network from outside the Milwaukee area, said Alfred Nicolosi, a heart surgeon at Froedtert and professor surgery at the Medical College of Wisconsin.

By being listed in two separate organ donor regions, he increased his odds of getting a heart sooner, Nicolosi said.

Eigel, who had worked in sales at George Watts and Son Inc. in Milwaukee, has known about his condition since childhood, he said in an interview before the surgery.

In fact, it has been the source a minor problems over the years, he said.

People would kid him about having his heart in the wrong place.

In grade school, teachers would correct him when he put his hand over the right side of his chest while saying the Pledge of Allegiance.

Eventually, he stopped trying to tell them about his condition and just did the Pledge like all the other kids.

"It's just a condition," he said. "It's kind of like being left-handed."

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