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Laying in a hospital bed at Henry Ford Health System in Detroit last March, Dwight Congress heard a sound that had been absent for a long time – the rhythmic beat of his heart.

At first, the 42 year old Detroit resident said, it was overwhelmingly loud “like a big drum.”

He joked to himself, “Can I live with all this noise?”

The recipient of a new medical procedure as part of a clinical trial at Henry Ford Health System in Detroit, Congress is grateful for the opportunity to find out.

A year earlier, doctors shocked the heavy equipment mechanic for the City of Detroit with news that his heart was twice its normal size. Even with drug therapy, they said, it would continue to swell and eventually stop working.

“I just thought I had a bad cold,” Congress said of the symptoms that left him tired, short of breath and with pains in his chest.

“They told me in five years I would be dead or need a new heart.”

Because of his failing condition, Congress qualified to be part of the human study during which the CorCap Cardiac Support Device, a mesh-like heart jacket, is placed around the heart and stitched in place to prevent any further enlargement.

Developed by Acorn Cardiovascular, Inc., CorCap is intended to be an adjunctive therapy for patients with moderate heart failure who typically have enlarged hearts that continue to get larger as the condition progresses.

Dr. Hani “Tony” Sabbah, director of cardiovascular research at Henry Ford, and original member of the team that developed CorCap, said the device – implanted in the first American in 2001 – is showing great promise. The first human implant in 1999 launched clinical safety studies in Germany and Australia. Results from these studies along with pre-clinical trial testing paved the way to begin worldwide, multi-center randomized clinical trials.

Sabbah said the present study is designed to confirm the safety of the CorCap and evaluate the effectiveness seen in the earlier studies.

“What we have found out is not only does it prevent the heart from getting bigger, it makes it pump even better,” Sabbah said. “It actually begins to transform all the bad, biomolecular changes taking place into more normalized processes.”

In other words, it returns the heart to its normal shape, thus making it pump more efficiently, he said.

“The fact may be that getting bigger and bigger is the cause of all problems,” he said.

Sabbah said the makers of the device considered multiple materials such as polyester before choosing mesh.

“Any time you put a foreign material in the body, there is a reaction,” he said, adding that mesh was the least reactive and with no side effects.

“One of the concerns we had is that it would constrict the heart,” he said. “But we have never been able to show that in patients or pre-clinicals.”

Congress said he first heard about a similar “cocoon around the heart” during a church service in which the minister said it saved his friend’s life.

Heavenly intervention, karma or just plain coincidence, turns out that own cardiac doctors were involved in the CorCap study. Henry Ford is among more than 30 major

medical centers participating in the trial. Among them, University of Michigan Medical Center.

“A year (after hearing about the cocoon), my doctor tells me about this heart thing and asks if I want to be part of the study,” he said. Of course, Congress said, he jumped at the chance even after learning that his chest would have to be cracked open as part of the surgical procedure.

“Hey, somebody had to be the first person to get a triple bypass,” he said, adding that it makes him feel good that he’s doing something that could save lives.

Besides that, he said, “I’m a married man with a family. I ain’t ready to die.”

Congress is among 150 people who will wear the device for at least a year and take medication, throughout which their progress will be compared to a control group of 150 others with similar conditions without the device.

The hour-and-a-half surgery in which the doctors “held my heart in their hands” required that his chest be cracked because his heart was too large to get to otherwise, Congress said.

“When it was over with and they woke me up, it felt just like taking a nap,” he said.

Except, of course for the pain that he likened to “getting hit by a truck.”

Congress said his biggest fear was having to rely on the breathing ventilator, but with the support of his family “I got through it day by day.”

Congress’ doctor, Barbara Czerska, Medical Director for Cardiac Transplantation and Head of Advanced Heart Failure at Henry Ford Health System, Detroit, said good candidates for the device are people with heart failure who are not responding to medical therapy.

“We work together with the surgeons to determine which patients are too sick to have this device or are too early in the progression of their disease,” she said. “We choose the proper patients who we believe will benefit the best.”

Sabbah added that those who are in advanced heart failure but not quite ready for a transplant are ideal candidates.

All patients in the study, including those without the device, are required to take their medications and participate in physical therapy.

“We teach all patients with heart failure how to exercise and how to be active,” she said, chuckling at the myth that people with weak hearts need lots of rest.

But, she added, “You have to do this slowly to improve.”

Congress said he is comfortable with light to moderate exercise that includes walking on a treadmill and swimming, but doubts he’ll be playing street basketball anytime soon. He also takes seven different medications every day, every morning and every night” to thin his blood, control his blood pressure and strengthen his heart.

Czerska is monitoring the progress of Congress and other study patients. Her findings will be included in the final study that researchers expect to present to the American Heart Association in November 2004. The next step would be to get the approval of the Food and Drug Administration.

So far, Congress said, so good. “My heart muscle was damaged and has deteriorated so I can’t run and I can’t do sit ups or push ups anymore. But my quality of life is better. I have no more heart pain. I prayed for something like this.

“If things hold up the way they have been, who knows, I might be out there running track again,” Congress said. “Right now, walking is good.”