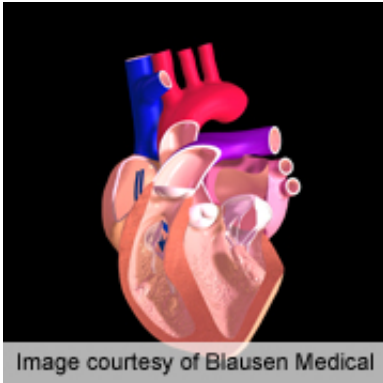


Gel implant might help fight heart failure

November 20 2014, by Dennis Thompson, Healthday Reporter



New treatment strengthens heart walls, researchers say, but skeptics remain.

(HealthDay)—Injecting beads of gel into the wall of a still-beating heart has the potential to improve the health of patients with severe heart failure, according to a new study.

Heart [patients](#) who received the gel implant had improved blood oxygen levels and were able to walk hundreds of feet farther during a six-minute walk test, said senior researcher Dr. Douglas Mann. He is chief of the cardiovascular division at Washington University School of Medicine and a cardiologist-in-chief at Barnes Jewish Hospital in St. Louis.

The study shows that treatment with the gel could be "a potential new therapy for patients with advanced [heart failure](#)," Mann said.

Mann presented the study's findings this week at the American Heart

Association (AHA) annual meeting in Chicago. Findings from meetings are considered preliminary until published in a peer-reviewed journal.

Of the 5.7 million Americans living with [heart](#) failure, about 10 percent have advanced heart failure, according to the AHA. The condition is considered advanced when conventional heart therapies and treatments no longer work, and patients feel shortness of breath and other symptoms even when resting.

The gel, Algisyl-LVR, is intended to shore up weakened heart walls, which are a major contributor to severe heart failure, according to Mann.

As heart walls weaken, the heart's chambers balloon out, which compromises the heart's efficiency and increases the risk of [congestive heart failure](#), [irregular heart rhythms](#), strokes and heart attacks, according to Mann.

The gel is described as an "injectable proprietary biopolymer" by its maker, Texas-based LoneStar Heart Inc., which funded the clinical trial.

Surgeons inject the gel directly into the heart's wall, where it hardens and widens the wall, according to the researchers. The goal is to return the heart to a more naturally healthy shape.

"This procedure can be done in a beating heart and does not require bypass surgery," Mann said.

In this trial, 35 [heart patients](#) received the gel implant while 38 received the standard medical therapy.

It took about 80 minutes to implant an average 15 gel beads into each patient's heart wall, according to Mann. They spent about two days in intensive care recuperating after the surgery, Mann said.

Six months later, the [gel](#) implant patients showed significant improvement compared with patients receiving regular care.

Their [blood oxygen levels](#) had improved slightly, while the levels of the non-implant patients had declined. The implant patients also were able to walk about 100 meters—328 feet—farther than the other patients in a six-minute walk test, according to the study.

"I'd like to also point out there was about a threefold decrease in worsening heart failure and hospitalizations in the treatment group," Mann said.

The next step will involve larger clinical trials with more patients. "Ongoing and future studies will provide insight into the potential long-term benefits of Algisyl," he said.

Despite these results, a note of skepticism was sounded by Dr. Mariell Jessup. She is associate chief of clinical affairs at the University of Pennsylvania School of Medicine's cardiovascular medicine division and medical director of the Penn Heart and Vascular Center in Philadelphia.

Jessup noted that strengthening the heart wall has been a longstanding goal in treating advanced heart failure, but previous surgical attempts to do so have all failed.

"The part of me that has to take care of my very sick patients hopes that this kind of research will continue, but sometimes as clinical investigators we get our hearts broken a little bit too when these studies are so difficult to show convincing benefits," she said.

More information: For more about advanced heart failure, visit the [U.S. National Institutes of Health](#).

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