Aortic valve replacement beats no surgery at all

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A minimally invasive procedure to replace the aortic valve without doing open heart surgery has better outcomes after five years than patients who did not have surgery at all, researchers said Sunday.

Aortic stenosis is a common form of heart disease, in which the valve does not open fully and decreases blood flow from the heart. Options for fixing it include open heart surgery, minimally invasive valve replacement by catheter, and inserting a catheter into the groin and inflating a small balloon in the aortic valve to open it, known as balloon aortic valvuloplasty.

In recent years, more promise has been seen for the second option—a procedure known as transcatheter aortic valve replacement (TAVR), for people who are elderly or too frail for open heart surgery.

Experts say TAVR may allow patients who are too frail for open heart surgery a better quality of life than the standard therapy of balloon aortic valvuloplasty.

The study published in *The Lancet*, and released simultaneously at the American College of Cardiology annual conference in San Diego, California, followed 358 patients with severe aortic stenosis for five years.

The patients' average age was 83, and they were evenly divided into two groups: one that had TAVR to replace their valve and one that had

balloon aortic valvuloplasty but no surgery.

The study found that those who had TAVR "lived longer, with better symptom management, fewer hospital readmissions and better functional status."

After five years, 28 percent of the TAVR group were still alive, compared to only 6.4 percent of the standard therapy group.

"This trial is the first—and will probably be the only—randomized aortic stenosis trial that includes a group of patients not treated with aortic valve replacement, since these results will make it unethical to treat severe aortic stenosis patients with medical therapy alone," said study author Samir Kapadia, director of the Sones Cardiac Catheterization Laboratories at Cleveland Clinic.

Another study released at the ACC conference showed promise for a new device that helps surgeons prevent dangerous debris from reaching the brain during transcatheter aortic valve replacement, resulting in better cognitive scores for patients who underwent the procedure.

A small fraction of the tiny particles that are dislodged from the valve during the operation may travel to the brain. This risks causing a stroke or a more subtle loss in mental abilities.

The new device, called TriGuard, covers the three arteries that lead to the brain with a temporary mesh shield.

A small trial involving 83 patients showed 22.2 percent of patients with the device had heart or brain complications in the week after surgery, compared to 31.6 without the protective mesh.

Fewer patients died after the procedure in the group using the

mesh—2.2 percent in the device group died compared to 5.3 percent in the control group.

Data from 30 days after the operation are expected in May.