

Doctors debate merit of bypass in heart patients

April 4 2011, by Kerry Sheridan

Doctors debated the merits of bypass surgery to solve heart problems during a major cardiology conference on Monday, as studies suggested angioplasty and medication could be safe alternatives.

One study by South Korean researchers found similar survival rates among people who had balloon angioplasty, a less invasive technique for opening the arteries, and among patients who underwent open heart surgery for serious coronary disease.

A second US study presented at the American College of Cardiology conference raised questions about whether bypass surgery or medication is best, but found that early risks of surgery complications may even out over time.

In bypass surgery, vessels are taken from a patient's arm or leg and sewn onto the heart to replace clogged ones. It is the most common method of treating people with left main coronary artery disease.

Doctors have long sparred over which method is best for treating the narrowing of the arteries that is the major cause of heart attacks, with [heart failure](#) afflicting more than six million people in the United States alone.

Angioplasty, a procedure to open blocked arteries, is less invasive than bypass surgery but can require more repeat procedures if the artery restricts again over time.

Huge improvements in medications to reduce cholesterol and improve heart function have also raised new questions about when surgery is the optimal choice.

The South Korean study involved a randomized clinical trial of 600 patients who received either angioplasty or bypass surgery, and showed similar survival rates and about the same number of major adverse events like heart attack and stroke after one year.

The PRECOMBAT trial's findings were also published Monday in the [New England Journal of Medicine](#).

The study used a primary outcome measure combining four factors to measure safety and efficacy: death from any cause, heart attack, stroke, and and the need for further treatment to reopen arteries using TVR (target vessel revascularization).

Death, heart attack and stroke rates were similar among the two groups.

Nine percent of patients in the angioplasty group experienced ischemia-driven TVR after two years, compared to 4.2 percent in the bypass group.

"The incidences of death, [heart attack](#) and stroke -- which are indicators of safety and have a significant impact on mortality -- were comparable," said Seung-Jung Park, lead study author.

"Although angioplasty did have a higher risk of TVR, this efficacy endpoint does not have a direct association with mortality and thus has a less significant implication than the safety outcomes," he added.

"Therefore we can conclude that angioplasty can be a feasible alternative to CABG (coronary artery bypass)."

However, he cautioned that the study was statistical in nature and "cannot be considered clinically directive."

The second study, known as the STICH trial, also sparked debate among experts with its findings that overall survival was about the same among patients treated with medication alone for clogged arteries versus bypass patients.

The international study was conducted at 99 medical centers in 22 countries, with about 600 patients randomly assigned to the ideal medical therapy alone for their ailment and another 600 assigned to bypass surgery plus medication.

Overall survival rates were similar among the two groups, and while bypass survival was initially lower, the rate covered after the two-year post-operation mark.

Patients who had bypass surgery eventually saw a significantly reduced risk of dying from [heart](#) disease (19 percent).

"The take home message, for me, is that STICH trial supports [bypass surgery](#) on top of the best medical therapy versus medical therapy alone to reduce cardiovascular related mortality," said Eric Velazquez, associate professor of medicine at Duke University and lead author of the study.

Cardiologist Spencer King, who moderated a panel of experts discussing the trials, described the findings as "a work in progress," and said the research provides more reason for doctors to carefully examine each patient's individual situation before deciding on a course of therapy.

"We have learned a lot of interesting things," King said.

"It doesn't tell me for sure that these patients for sure should have surgery, it doesn't tell me for sure that they shouldn't."

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