Medical Xpress

Bypass surgery, medications both options to be considered for heart failure patients with coronary artery disease

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(PhysOrg.com) -- A new study found that coronary artery bypass surgery added to medical therapy for selected chronic heart failure patients offered benefits over medical therapy alone. The combination of the two treatment approaches reduced the combined rate of deaths and heart-related hospital stays by 15 percent, although the total number of deaths between the two groups of patients was not significantly different, according to the National Institutes of Health-funded research.

The findings suggest that bypass surgery might be a viable option for more coronary heart disease patients than previously thought. Coronary artery bypass surgery has been routinely considered for patients with advanced heart failure only if they had symptoms, like chest pain, that are directly attributable to reduced blood flow to the heart. However, many physicians did not think of coronary bypass surgery as a specific therapy for heart failure, a condition that is primarily caused by poor heart pump function.

Patients who survived the surgery experienced fewer heart-related hospital stays over the course of the follow up period, which averaged 56 months. The study results were published online Monday in the New England Journal of Medicine and also presented during the late-breaking clinical trials session at the American College of Cardiology (ACC) annual meeting in New Orleans.

"Heart failure is a growing problem in the United States," said Susan B. Shurin, M.D., acting director of the NIH's National Heart, Lung, and Blood Institute (NHLBI), which supported the study. “Studies like this that compare different treatment options are critical in helping determine the most effective ways to reduce the burden of this condition.”

The multi-center Surgical Treatment for Ischemic Heart Failure (STICH) trial scientists wanted to learn whether adding coronary artery bypass surgery to medical therapy could reduce the number of deaths in patients with chronic heart failure. Eric Velazquez, M.D., at Duke University in Durham, N.C., led a team that enrolled 1,212 participants in 22 nations. Participants, with an average age of 60, were randomly assigned to one of two groups. The 602 patients in the medical therapy group received individualized treatment based on established guidelines, which would typically include drugs such as beta blockers, ACE inhibitors, statins, and aspirin. The second group of 610 participants received the same level of treatment as the medical therapy group plus coronary artery bypass surgery.

The investigators found that adding bypass surgery to medical therapy resulted in a small, but not statistically significant, drop in the overall death rate, which was the main outcome sought in the study. Overall, 36 percent of patients in the surgery plus medical therapy group died during the follow-up period compared to 41 percent of participants in the medical therapy group.The surgery plus medical therapy group had a statistically significant lower combined rate of death or heart-related hospital stays — 58 percent — compared to a 68 percent rate for those in the medical therapy group.

Similarly, 28 percent of participants assigned to surgery plus medical therapy died from heart-related causes, compared to 33 percent of participants assigned to medical therapy alone. While there is a short-

term risk of dying from surgery, the study suggests that as time goes on, patients who undergo surgery may be less likely to need future heart-related hospital stays. Researchers plan to follow participants to see if survival rates and other benefits increase over a longer time.

In coronary artery bypass surgery, healthy arteries or veins from elsewhere in the body are attached to the arteries of the heart (coronary arteries) to improve blood circulation to heart muscle. The new blood vessels bypass obstructions in the coronary arteries.

An estimated 5.8 million Americans live with heart failure. In 2010, medical expenses related to heart failure hit nearly $40 billion in the United States. Heart failure occurs when not enough blood can be pumped through the body. Symptoms of heart failure include shortness of breath and tiredness. Swelling of the ankles, feet, legs, abdomen, and neck veins may also occur. While there is no cure for heart failure, lifestyle changes, medications, and certain devices (like implantable defibrillators and two-sided pacemakers) can improve survival and reduce the often debilitating symptoms of the condition.

Provided by National Institutes of Health

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