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News

STS Press Release

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Surgery Improves Survival in Diabetic Patients with Heart Disease

Results reflect a 'real world' picture of diabetic patients

Chicago – Among diabetic patients with severe heart disease, coronary artery bypass grafting (CABG) surgery is better than stenting (percutaneous coronary intervention; PCI) at improving long-term survival and reducing the risk of adverse complications, according to an article in the April 2015 issue of *The Annals of Thoracic Surgery*.

“Adults with diabetes are two to four times more likely to have heart disease than non-diabetics, and at least 65% of these patients will die from their heart disease,” said Paul Kurlansky, MD, from Columbia University Medical Center in New York, who led the study. “Diabetic patients who require medical intervention for their heart disease should speak candidly with their physician to determine the best treatment option for them. Our study has shown that this discussion should be informed by the general superiority of bypass surgery over stenting for this population.”

Using a community-based registry, Dr. Kurlansky and colleagues examined data on all patients undergoing CABG or PCI for coronary artery disease February 1–July 31, 2004, who also had follow-up data by 2011. Of the 1,082 patients who met the criteria, the researchers were able to compare 240 well-matched patients from each treatment group.

“Unlike a lot of other studies that focus on select groups of patients who receive special therapies, our results reflect a ‘real world’ picture of contemporary medical practice and are broadly applicable to the general population of diabetic patients with severe coronary artery disease,” said Dr. Kurlansky.

Key Points

- Diabetic patients with severe heart disease have improved long-term survival and fewer complications when undergoing CABG surgery compared with PCI.
- Researchers also found that diabetic patients in general had higher rates of mortality and increased odds of adverse complications compared with non-diabetic patients.
- Study results reflect a “real world” picture of contemporary medical practice and are broadly applicable to the general population of diabetic patients with severe coronary artery disease.

Results showed that mortality was more common in patients who received PCI than those who underwent CABG. Patients in the PCI group also had a higher risk of non-fatal heart attack and need for revascularization. Dr. Kurlansky said that CABG may be more effective in this growing segment of the population because diabetes is a systemic rather than a localized disease. “Since PCI addresses localized lesions, CABG addresses the entire downstream circulation, which tends to be a more complete solution for these patients.”

The study did not examine the long-term risk of stroke among the two patient groups, and the researchers note that this parameter warrants further investigation.

“Each patient is an individual and needs to be carefully evaluated according to his or her specific circumstances and needs,” said Dr. Kurlansky. “The most important advice for the diabetic patient is to control modifiable risk factors for heart disease—stop smoking, lower your blood pressure, control your weight, exercise, and monitor your blood sugar levels.”

Importance of Heart Team Approach

In an invited commentary in the same issue of *The Annals*, Robert F. Tranbaugh, MD, from Mount Sinai Beth Israel in New York, emphasized the importance of the findings noting, “Kurlansky et al are to be commended for their efforts to better define the optimal treatment of diabetic patients with coronary artery disease.”

“It is important for these findings to be incorporated into the management of diabetic patients with multivessel heart disease, starting with an emphasis on the heart team approach,” said Dr. Tranbaugh. “Cardiac surgeons and cardiologists need to work together in the decision making and need to be advocates for our patients, seeking the safest and most durable treatment option.”

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To access the article on *The Annals of Thoracic Surgery* website, click here:

[http://www.annalsthoracicsurgery.org/article/S0003-4975\(14\)02199-7/abstract](http://www.annalsthoracicsurgery.org/article/S0003-4975(14)02199-7/abstract)

Founded in 1964, The Society of Thoracic Surgeons is a not-for-profit organization representing more than 6,900 cardiothoracic surgeons, researchers, and allied health care professionals worldwide who are dedicated to ensuring the best possible outcomes for surgeries of the heart, lung, and esophagus, as well as other surgical procedures within the chest. The Society’s mission is to enhance the ability of cardiothoracic surgeons to provide the highest quality patient care through education, research, and advocacy.

The Annals of Thoracic Surgery is the official journal of STS and the Southern Thoracic Surgical Association.