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News

STS Press Release

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Strict Blood Sugar Control After Heart Surgery May Not Be Necessary

Study results may encourage hospitals to consider more liberal blood sugar control policies

Chicago – Patients undergoing coronary artery bypass grafting (CABG) surgery may not have to follow a strict blood sugar management strategy after surgery, according to a study in the October 2014 issue of *The Annals of Thoracic Surgery*.

Previous research has shown that hyperglycemia (high blood sugar) after CABG and other cardiac surgery is associated with increased morbidity and mortality; however, more recent studies have shown that liberal maintenance of blood glucose levels (<180 mg/dL) after CABG surgery can be safer and more advantageous in both diabetic and non-diabetic patients.

A. Thomas Pezzella, MD, Niv Ad, MD, and colleagues from Inova Heart and Vascular Institute in Falls Church, VA, used data from patients enrolled in one of their previously published studies to assess long-term survival and health-related quality of life based on glucose control following first-time isolated CABG surgery.

"The study randomly assigned heart bypass surgery patients, with and without diabetes, to two types of blood sugar control. In one group, blood sugar control was tightly controlled, which was the standard procedure at our hospital. The second group had blood sugar controlled more loosely," said Dr. Ad. "The original study only focused on how blood sugar control affected complications in the hospital, so we were interested in following those same patients over time to see if blood sugar control had any impact after discharge from the hospital."

The new study found that survival after heart bypass surgery was not affected by the level of blood sugar control in the hospital while recovering from surgery, as long as blood sugar was kept below 180 mg/dL. The new study also found that health-related quality of life significantly improved in all patients from baseline to 6 months, whether or not they had strict blood sugar control.

Key Points

- Liberal management of a patient's blood sugar levels following CABG surgery leads to similar survival and long-term quality of life as achieved through stricter blood sugar management.
- The findings applied to all patients, regardless of diabetes status.
- The results may encourage hospitals to consider more lenient blood sugar control in all patients after heart bypass surgery.

"We hope that these results will encourage more hospitals to consider a less strict control of blood sugar in all patients after heart bypass surgery, which could reduce the chances for hypoglycemic [low blood sugar] events in the hospital, as well as secondary complications from drops in blood sugar," said Dr. Ad.

Reassurance for Patients

In an invited commentary in the same issue of *The Annals*, Harold L. Lazar, MD, from Boston Medical Center, said that the study provides some assurance to heart surgery patients. "Since most groups are moving away from aggressive blood sugar control because of a higher incidence of hypoglycemia low blood sugar, this study's results will provide some affirmation that, at least for overall survival, there is no difference between the two techniques," said Dr. Lazar.

"One limitation of the current study is that Pezzella and colleagues report only on survival. We don't know if there were differences in cardiac-related issues, such as heart attacks, recurrent angina, need for repeat coronary revascularization procedures, or long-term readmissions for acute coronary syndromes," said Dr. Lazar. "This is important for future research since many of these patients have other comorbid diseases that are not related to their heart."

Additional co-authors on the study include Sari. D Holmes, PhD, Graciela Pritchard, BS, and Alan M. Speir, MD, all from Inova Heart and Vascular Institute in Falls Church, VA.

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For a copy of the study or commentary contact Cassie McNulty at 312-202-5865 or cmcnulty@sts.org.

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.