Elevated Triglycerides Make a Difference in Women's Risk of CHD

While great attention and clinical efforts have been directed toward LDL-C-lowering, the Framingham Heart Study 30-year follow-up clearly showed that elevated triglycerides (TG) are also associated with an increased risk of coronary heart disease (CHD) — especially in women.1

Elevated Triglyceride (TG) Levels in Women

CHD Risks With Diabetes or Metabolic Syndrome* in Women: Role of TG and HDL-C

Of the estimated 16 million Americans with diabetes, more than half are women.1 In women, diabetes is a powerful risk factor for CHD, increasing CHD risk 3-fold to 7-fold compared to a 2-fold to 3-fold increase in men. It has also been shown that metabolic syndrome is associated with a 2-fold risk of CHD mortality in women.2 It is important to note that the most common pattern of dyslipidemia in patients with type 2 diabetes is elevated TG levels and decreased HDL-C levels.3

*Statistically significant.

In addition, meta-analyses demonstrated that every 1 mmol/L (89 mg/dL) increase in TG increased cardiovascular disease (CVD) risk by:4

- Increased TG
- Increased Risk of CVD*

32% in ~46,000 women (16 studies)
76% in ~11,000 women (5 studies)

CHD is the #1 Killer of Women

The effect of elevated TG in women is important to keep in mind in view of the fact that CHD is the single leading cause of death among American women, claiming nearly 500,000 lives each year.1

Menopausal women are particularly at risk, with CHD rates 2 to 3 times those of women the same age who are premenopausal.1

References:

What TG means to a woman's heart

Source: Dr. Halkos

*Statistically significant.

Note: Adverse outcomes occurred during hospitalization after surgery.

Source: Dr. Halkos

Rate of Adverse Events After CABG Linked to HbA1c Levels

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WASHINGTON — Serum level of hemoglobin A1c was better than diabetic status for identifying patients with the highest risk of bad outcomes following coronary artery bypass surgery, in a review of more than 3,000 patients.

“A hemoglobin A1c [HbA1c] level of 7% or higher was a powerful predictor of inhospital mortality or morbidity after elective coronary artery bypass surgery,” Dr. Michael E. Halkos said at the annual meeting of the American Association for Thoracic Surgery. Mortality and morbidity in patients with an HbA1c level lower than 7% were similar to those of patients without diabetes, said Dr. Halkos, of the division of cardiothoracic surgery at Emory University, Atlanta.

These findings raise the possibility of delaying elective coronary surgery in patients with poorly controlled diabetes until their control improves and their serum level of HbA1c drops, he said.

The review included 3,555 consecutive patients who underwent primary, elective coronary artery bypass graft (CABG) at the university during April 2002-June 2006. The series included 3,089 patients whose records included a measure of serum HbA1c taken shortly before surgery. All patients were treated with a uniform and strict insulin-infusion regimen during the intraoperative and perioperative periods that was designed to maintain blood glucose levels at less than 120 mg/dL.

A total of 2,275 patients (74%) had a preoperative HbA1c level lower than 7%, and 814 (26%) had a level of 7% or higher. In addition, 1,240 patients (40%) were diagnosed with diabetes or had a history of diabetes before surgery, and 1,849 (60%) had no history of diabetes. Among the patients with a history of diabetes, 42% were well controlled with an HbA1c level lower than 7%, with an HbA1c level lower than 7%.

Surgical outcomes were assessed by the incidence of five adverse events during hospitalization following surgery: death, myocardial infarction, stroke, renal failure, and deep sternal-wound infection.

The incidence of four of these five adverse events were all significantly reduced among the patients who had surgery with an HbA1c level lower than 7%, compared with those whose level was 7% or higher. The only outcome that was not significantly less was myocardial infarction. (See box.)

In contrast, when patients with and without a history of diabetes were compared, stroke was the only adverse outcome that was significantly more common among the patients with diabetes. Dr. Halkos said. In addition, when the incidence of adverse events was tallied only among well-controlled patients with diabetes (those with an HbA1c level lower than 7%), the rates were not significantly less than the rates among the patients without diabetes.

Another analysis of the data used HbA1c levels as a continuous variable, instead of a dichotomous variable with the cut point at 7%. A multivariate analysis that adjusted for baseline differences in the patients showed that every 1% increase in HbA1c level was linked with a statistically significant increase in the incidence of four of the five adverse outcomes studied following CABG. The only outcome that did not show a significant relationship was stroke.