

cularization if needed, had a 2.3% perioperative event rate, compared with a 1.8% rate in those who weren't evaluated with echocardiography. After 2 years of follow-up, the event rate was 4.3% in patients who had preoperative testing and 3.1% in patients who did not have routine testing.

The value of perioperative statin treatment is now being tested in a prospective, controlled study, DECREASE-IV, which involves coadministration of a statin and β -blocker. But results from less-definitive studies have suggested that statin treatment is another way to lower operative risk.

Results from one of these studies were reported at the meeting. Dr. Poldermans and his associates used data drawn from the more than 100,000 patients who underwent noncardiac and nonvascular surgery at Erasmus University Medical Center during 1991-2000. The cases were 923 patients who died during their post-surgical hospitalization. The controls were 1,846 patients (two controls per case) who did not die. Both β -blockers and statins were used less often in the cases than in the control patients. A statistical analysis showed that treatment with a β -blocker reduced perioperative mortality by about 60%, and that treatment with a

statin was independently also linked with a 60% reduction in the mortality rate, reported Dr. Peter G. Noordzij, a researcher who works with Dr. Poldermans in the department of anesthesiology.

Until results from DECREASE-IV are available, Dr. Poldermans and his associates maintain all surgery patients on a statin if they are already taking one preoperatively, and they start statin treatment in high-risk patients. The main potential downside of perioperative statin treatment is that patients can develop myopathy or rhabdomyolysis and not recognize new-onset muscle pain to help diagnose these adverse effects. ■

High Glucose Ups Surgical Mortality Risk

BY MITCHEL L. ZOLER
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BARCELONA — High serum glucose levels in patients undergoing surgery were associated with significantly higher rates of death and cardiac death in a case-control study with more than 2,000 patients.

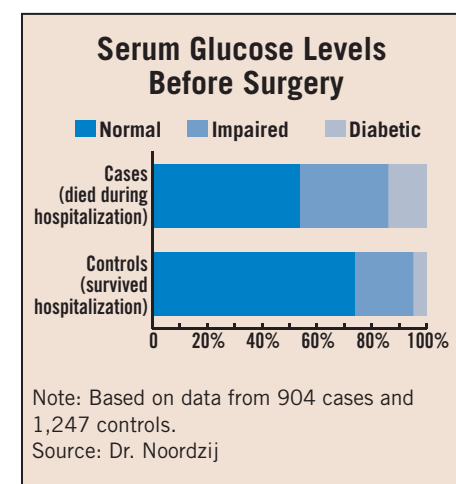
A statistical analysis showed that every 18 mg/dL increase in the preoperative glucose level was associated with a statistically significant 12% increased rate of all-cause mortality and a 14% increased rate of cardiovascular death in patients who underwent noncardiac and nonvascular surgery, Dr. Peter G. Noordzij and his associates reported in a poster at a joint meeting of the European Society of Cardiology and the World Heart Federation.

The researchers reviewed 989 patients who died during their hospitalization after noncardiac and nonvascular surgery out of the more than 100,000 patients who had this type of surgery at Erasmus Medical Center in Rotterdam, the Netherlands, during 1991-2000. These cases were matched with similar patients who underwent surgery during the same period but did not die while in the hospital. The cases and controls were matched for age, sex, type of surgery, and calendar year of surgery.

Preoperative glucose levels were available for 904 cases and 1,247 controls, and these patients were used for the analysis. Their average age was 63 years; 61% were men.

Preoperative serum glucose levels were defined as normal if they were less than 140 mg/dL, impaired if they were 140-200 mg/dL, and diabetic if they were above 200 mg/dL. The prevalence of impaired and diabetic levels of serum glucose was significantly higher in the cases, compared with the controls (see box), reported Dr. Noordzij, a physician in the department of anesthesiology at Erasmus Medical Center.

A multivariate analysis that controlled for the presence of several cardiovascular risk factors found that increasing levels of serum glucose were linked with an increased rate of all-cause death and cardiovascular death. The analysis also showed that patients with a serum glucose level that reached the diabetic level had twice the risk of dying while hospitalized after surgery, compared with patients with a normal glucose level. ■



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INCREASED ACTIVITY OF THE ENDOCANNABINOID SYSTEM (ECS) IS ASSOCIATED WITH INCREASED WAIST CIRCUMFERENCE^{1,2}

INCREASED WAIST CIRCUMFERENCE, A MARKER FOR IAA, IS AN ESTABLISHED CARDIOMETABOLIC RISK FACTOR³

- Significantly increases the risk of myocardial infarction, death from cardiovascular disease, and all-cause mortality⁴
- Has been found to be an independent predictor of type 2 diabetes⁵

ADIPOSE TISSUE IS A HIGHLY ACTIVE ENDOCRINE ORGAN⁶

- Fat cells (adipocytes) produce adiponectin⁶
 - In type 2 diabetes and obesity, adiponectin levels are reduced⁶

TARGETING THE ECS MAY PLAY A POTENTIAL ROLE IN THE CONTROL OF MAJOR CARDIOMETABOLIC RISK FACTORS SUCH AS IAA*

References

1. DiMarzo V, Matias I. Endocannabinoid control of food intake and energy balance. *Nat Neurosci.* 2005;8:585-589.
2. Cota D, Marsicano G, Tschöp M, et al. The endogenous cannabinoid system affects energy balance via central orexigenic drive and peripheral lipogenesis. *J Clin Invest.* 2003;112:423-431.
3. National Heart, Lung, and Blood Institute. National Cholesterol Education Program. *ATP III Guidelines At-A-Glance: Quick Desk Reference.* Bethesda, Md: National Institutes of Health; May 2001.
4. Dagenais GR, Yi Q, Mann JFE, et al. Prognostic impact of body weight and abdominal obesity in women and men with cardiovascular disease. *Am Heart J.* 2005;149:54-60.
5. Carey VJ, Walters EE, Colditz GA, et al. Body fat distribution and risk of non-insulin-dependent diabetes mellitus in women: the Nurses' Health Study. *Am J Epidemiol.* 1997;145:614-619.
6. Kershaw EE, Flier JS. Adipose tissue as an endocrine organ. *J Clin Endocrinol Metab.* 2004;89:2548-2556.