

Type 1 diabetes and heart disease -- Heavier may mean healthier

June 24 2007

Researchers at the University of Pittsburgh Schools of the Health Sciences studying links between an early sign of heart disease called coronary artery calcification and body fat have found that, paradoxically, more fat may have some advantages, at least for people – particularly women – who have type 1 diabetes. Cardiovascular complications, including heart disease, are a leading cause of death for people with diabetes, who tend to suffer cardiovascular disease decades earlier than non-diabetics.

“Gaining weight may reflect good or better treatment with insulin therapy, which may partly explain why participants who gained weight over time had lower mortality rates,” said Trevor Orchard, M.D., professor of epidemiology at the University of Pittsburgh Graduate School of Public Health (GSPH), who is presenting the findings during the 67th annual meeting of the American Diabetes Association.

For this particular report, Dr. Orchard and his colleagues focused on 315 patients with type 1 diabetes participating in the Pittsburgh Epidemiology of Diabetes Complications Study, an 18-year prospective study of childhood onset type 1 diabetes, which began in 1986. As part of the study, the patients recently received a special computed tomography scan (CT) to assess coronary artery calcification.

The participants’ mean age was 42, and mean duration of diabetes was 34 years. In addition to the CT scan, patients were evaluated for fat underneath the skin and in the abdominal region, body mass index (BMI)

and waist circumference. Although investigators noted a positive association for all measures of fatness and having any coronary artery calcification, in the two-thirds of patients who had calcification, the relationship reversed so that people with more fat had less severe calcification.

This association also varied by gender. Women with less fat under the skin had more evidence of coronary artery calcification than those with more fat. Thinner men also had more evidence of coronary artery calcification than men with a higher BMI.

“What it comes down to is a kind of double-edged relationship,” said Baqiyyah Conway, M.P.H., lead author of the abstract, adding that these associations of less severe artery calcification with greater fat persisted even when controlling for standard cardiovascular disease risk factors such as increased levels of LDL, or bad cholesterol, triglycerides, high blood pressure and lower levels of HDL, or good cholesterol. Controlling for kidney disease, another common complication of diabetes, weakened the association in men but not in women.

“This is not a firm recommendation to people with type 1 diabetes to put on weight, but it does raise the possibility that weight recommendations in type 1 diabetes may be somewhat different than those for the general population, and emphasizes the complex relationship between body fat and cardiovascular risk in diabetes,” said Dr. Orchard, who also is professor of medicine and pediatrics at the University of Pittsburgh School of Medicine.

Source: University of Pittsburgh Schools of the Health Sciences

retrieved 10 December 2023 from

<https://medicalxpress.com/news/2007-06-diabetes-heart-disease-heavier.html>

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