VERBATIM

'It's one thing to be sued for medical complications of a 50-year-old ... but much more serious in a 16-year-old.'

Dr. Scott A. Shikora, on the need for rigorous patient selection when considering bariatric surgery in children and adolescents, p. 38

High BMI, Blood Glucose Tied to Blood Ca Deaths

BY JEFF EVANS
Senior Writer

BETHESDA, MD. — High body mass index and high plasma glucose levels after an oral glucose challenge are independently associated with an increased risk of dying of hematopoietic cancer, Dr. Brian Chiu reported at the annual meeting of the American Society of Preventive Oncology.

In some instances, those two factors showed a strong, dose-response relationship in increasing the risk of dying of hematopoietic cancer, particularly non-Hodgkin lymphoma (NHL) or leukemia.

"We are particularly focusing on non-Hodgkin lymphoma because according to Surveillance, Epidemiology, and End Results (SEER) data, the incidence of non-Hodgkin lymphoma in the United States has been increasing dramatically during the past 30 years" from about 10 cases per 100,000 person-years in 1973 to 20 per 100,000 in 2002, said Dr. Chiu of the department of preventive medicine at Northwestern University, Chicago. The increase has occurred in both men and women.

The prevalence of obesity has also increased at the same time, rising by 60% from 1970 to 1990 and by 74% from 1990 to 2002, according to data from the first three National Health and Nutrition Examination Surveys. The prevalence of diagnosed diabetes increased by about 60% during 1990-2004.

Both men and women in the highest quartile of BMI were 2-2.4 times more likely to die from leukemia than were those in the lowest quartile.

The current prospective study involved 35,420 people (average age 40 years) who participated in the Chicago Heart Association Detection Project in Industry during 1967-1973. The study was originally designed to screen for cardiovascular disease risk factors.

At baseline, participants' height and weight were assessed, as was blood glucose level 1 hour after they received an oral 50-g dose of glucose.

Dr. Chiu found that by the end of 2002, 129 study participants had died of NHL, 151 of leukemia, and 66 of multiple myeloma.

Men in the highest quartile of BMI (28.7 kg/m^2 or greater) or in the highest quartile of postload plasma glucose (200 mg/dL or greater) were at about 2.5 times greater risk of dying from NHL than were men in the lowest quartiles. The risk was not significant for women in these groups.

Both men and women in the highest quartile of BMI also were 2-2.4 times more likely to die from leukemia than were those in the lowest quartile. Women, but not men, in the highest quartile of postload plasma glucose were significantly more likely to die of multiple myeloma than were women in the lowest quartile. The comparisons were adjusted for age, education, smoking status, race, and BMI or postload plasma glucose (depending on the comparison).

Dr. Chiu collected data on participant mortality, but not on the prevalence of hematopoietic cancers at baseline. He excluded people who died of a hematopoietic cancer within the first 5 years of the follow-up. ■

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