

Pediatric Triglycerides Predict Adulthood Events

BY BRUCE JANCIN

ORLANDO — Triglyceride levels during childhood are potent predictors of cardiovascular events in early adulthood, according to a longitudinal follow-up study.

“Childhood triglycerides are uniformly, consistently, and independently a significant predictor of early adulthood cardiovascular events,” said Dr. Samrat Yeramaneni, whose study was one of the first to examine the relationship between childhood risk factors and adult cardiovascular events, rather than surrogate end points such as carotid intimal medial thickness.

High childhood LDL cholesterol levels get plenty of attention from family physicians and pediatricians, but childhood hypertriglyceridemia is widely underad-



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DR. YERAMANENI

ressed in the primary prevention of cardiovascular disease, Dr. Yeramaneni said at the annual meeting of the American College of Cardiology.

“We’d suggest to physicians that when the kids come to the clinic, look at the complete lipid profile and put special emphasis on the triglycerides, knowing that high triglycerides significantly predict cardiovascular events in adulthood,” said Dr. Yeramaneni of Jewish Hospital in Cincinnati.

He presented a 22- to 31-year follow-up of 808 subjects first evaluated as Cincinnati school children, mean age 12 years, in the mid-1970s. At follow-up at a mean age of 39 years, 19 subjects had experienced a collective 29 cardiovascular events, including 8 myocardial infarctions, 2 ischemic strokes, 11 carotid or femoral bypasses, and 1 coronary artery bypass graft.

Compared with the 789 cardiovascular disease-free controls, subjects with cardiovascular disease had significantly higher pediatric triglyceride levels by a margin of 127 mg/dL to 76 mg/dL. Seven of the 19 subjects with cardiovascular events had childhood triglyceride levels above the 95th percentile, and 6 of these 7 also had hypertriglyceridemia as adults, defined by a level of 150 mg/dL or more. All told, 13 of 19 individuals with cardiovascular disease had high triglycerides as adults.

In an adjusted multivariate analysis, each 1-unit increase in childhood triglyceride level on a natural logarithmic scale was associated with a 5.4-fold increased risk of having a cardiovascular event in the fourth or fifth decade of life, Dr. Yeramaneni continued.

Increased body mass index in childhood was another independent predictor

of cardiovascular events in early adulthood. The mean childhood BMI in controls was 20.0 kg/m² compared with 24.3 kg/m² in the 19 subjects who went on to have cardiovascular disease.

“While lowering LDL cholesterol levels remains a primary therapeutic target, pediatric triglycerides and obesity—as well as smoking and early-onset type 2 diabetes—remain serious risk factors for early cardiovascular disease,” he observed.

Indeed, at follow-up in adulthood, 6 (32%) of the 19 individuals with cardiovascular disease had type 2 diabetes, compared with 4% of controls. Moreover, 9 of the 19, or 47%, were current smokers, a proportion twice that in controls. About 15% in each group were former smokers.

In this longitudinal study, elevated LDL in childhood was not a significant predictor of early adult cardiovascular disease because these individuals were on

statins by the time they had their cardiovascular events. “Their physicians were taking care of their LDL,” Dr. Yeramaneni noted.

He suggested starting out with lifestyle changes in exercise and diet. If the child’s triglycerides remain high after 6 months, he would turn to triglyceride-lowering drugs. Another option would be to prescribe omega-3 fatty acid supplements long term. ■



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