Early Adversity Linked to Risk of Adult Obesity

BY DAMIAN McNAMARA
Miami Bureau

Some stressful childhood emotional experiences are associated with an increased likelihood of adult obesity and, therefore, a greater risk for type 2 diabetes, according to findings of a British population-based study of more than 9,000 participants.

Claudia Thomas, Ph.D., and her associates studied 9,310 participants of a 1958 British birth cohort followed longitudinally up to age 45 years. They were asked about emotional and physical neglect, household dysfunction, and abuse at different evaluations during the longitudinal study. The investigators looked for associations with midlife body mass index (BMI), central obesity, and glucose control (Pediatrics 2008;121:e1240-9 [doi:10.1542/peds.2007-2403]).

"We found that several different experiences, ranging from severe adversities, such as physical abuse, to other experiences, such as less severe forms of emotional neglect, increased the risk for obesity and, in doing so, increased the risk for poor glucose control," wrote Dr. Thomas and her associates from the Centre for Paediatric Epidemiology and Biostatistics, Institute of Child Health, University College London.

The investigators found some significant correlations, some nonsignificant trends, and even an inverse relationship (between parental depression and later adverse health outcomes measured).

Of the adversities measured during childhood, low parental aspirations and little paternal or maternal interest in education were significantly associated with increased BMI, central obesity, and a glycosylated hemoglobin (HbA_{1c}) of 6% or greater at 45 years. Children who reported that they hardly ever took outings with their father had significantly higher midlife BMI and central obesity rates, but a nonsignificant increased risk of an HbA_{1c} of 6% or greater.

In contrast, children who reported that their mother hardly ever read to them or they did not "get on with either parent" were not at an increased risk. Likewise, those who appeared scruffy or dirty (at 7 and 11 years, according to teachers), experienced domestic tension and/or parental alcoholism or were placed in local or voluntary care before age 16 years were not more likely to have a higher adiposity or worse glucose control.

Dr. Thomas and her associates also adjusted for possible confounders. When they did, only a few correlations remained significant. All children who reported their mother had little interest in their education had significantly increased BMI and likelihood of HbA_{1c} of 6% or greater. Girls in this group also had a significantly increased likelihood of later central obesity. Socioeconomic position at birth, type of accommodation (owned vs. rented), number of persons per room in household, and whether any child received free school meals at age 11 or 16 years were the possible confounders.

Dr. Thomas and her associates also retrospectively asked participants at age 45 about childhood adversity. They found a strict upbringing significantly related to increased BMI, central obesity, and an HbA_{1c} of 6% or greater. Reported physical abuse also was significantly associated with increases in adiposity.

Previous studies have linked abusive and neglectful experiences early in life with increased risks of obesity, cardiovascular disease, diabetes, and liver disease. Associations between lower childhood socioeconomic status and increased risk of insulin resistance and type 2 diabetes also are proposed in several studies. ■

Psychosocial Competence May Affect Diabetes Control

BY KERRI WACHTER
Senior Writer

WASHINGTON — Total social competence and externalizing behavior may play a role in how well children and adolescents control their diabetes, according the results of a study involving 78 patients.

"Lower total psychosocial competence is a strong predictor of poor metabolic control in diabetic youth," Dr. Ivana Balic, a general psychiatry resident, and Dr. Burleson W. Daviss, a child psychiatrist, both of the University of Texas Health Sciences Center at San Antonio, wrote in a poster. Externalizing psychopathology was a lesser predictor.

Age and living with a single parent also were significant predictors of poor metabolic control.

DR. DAVISS

The researchers recruited 78 children and adolescents (mean age 12 years) from a clinic or a diabetes camp for this study, presented at the annual meeting of the American Psychiatric Association. Using the Child Behavior Checklist, they assessed total social competence and externalizing symptoms. Along with sociodemographics, the researchers assessed these factors as predictors of poor metabolic control 3 months later. Poor metabolic control was defined as an HbA_{1c} level of 10 mg/dL or greater. In all, 56% of the youth had poor metabolic control. On univariate analysis, age and living with a single parent were significant predictors of poor metabolic control, along with lower total social competence, family conflict, dietary noncompliance, and externalizing symptoms. Interestingly, internalizing symptoms did not significantly predict poor metabolic control.

All of the significant predictors from univariate analysis were incorporated into the backward stepwise logistic regression. The final predictive model included age, living with a single parent, lower total social competence, dietary noncompliance, and family conflict. This model correctly classified 74% of the youth with poor metabolic control.

Total competence, as tested by the Child Behavioral Checklist, describes children's capability in school activities, social activities, and other areas of competence. "Children who do a good job at the things that total competence is measuring also are more likely to do a better job at handling their diabetes," said Dr. Balic in an interview. Children who have trouble in these areas might have more trouble managing diabetes. ■