Infant Growth and Health Outcomes in Adolescents Born Extremely Preterm

The objective of this study was to evaluate the association between infant weight gain and health and neurodevelopmental outcomes at 10 and 15 years of age among children born extremely preterm. A cohort of neonates born extremely preterm were evaluated for weight gain in the first two years of life and cognitive, behavioral, and health outcomes at 10 and 15 years of age. Infant weight gain was classified as “slower” if the increase in weight z score in the first two years after discharge from neonatal intensive care was less than -0.67 and “faster” if the increase in weight z score was greater than 0.67. Infants with an increase in weight z score during the first two years of -0.67 to +0.67 served as the referent group. Associations between two-year weight gain and outcomes at 10 and 15 years of age were evaluated with logistic regression models, adjusting for potential confounds. In contrast to the study hypothesis, except for a higher rate of anxiety at 15 years among participants with faster infant weight gain, neither faster nor slower infant weight gain was associated with adverse health or neurodevelopmental outcomes at either 10 or 15 years. In a pre-specified test of interaction between sex and infant weight gain, faster infant weight gain was associated more strongly with obesity among females than among males. In this cohort of individuals born extremely preterm, the change in weight z score in the first two years after discharge from neonatal intensive care was not associated with health or developmental outcomes in adolescence.