Adult Talk in the NICU With Preterm Infants and Developmental Outcomes

WHAT'S KNOWN ON THIS SUBJECT: It is known that adult language input is important to healthy language development and that preterm infants are at risk for language delay.

WHAT THIS STUDY ADDS: This is the first study to provide evidence that preterm infants' exposure to adult words in the NICU before the mother's due date are associated with better cognitive and language outcomes at 7 and 18 months' corrected age.

AUTHORS: Melinda Caskey, MD,[a] Bonnie Stephens, MD,[b] Richard Tucker, BA,[a] and Betty Vohr, MD[a]

[a]Department of Pediatrics, Women & Infants Hospital, Providence, Rhode Island; and [b]Community Medical Center, Missoula, Montana

abstract

OBJECTIVE: The goal of this study was to test the association of mean adult word counts at 32 and 36 weeks' postmenstrual age in the NICU with Bayley Scales of Infant and Toddler Development, 3rd Edition (Bayley-III), cognitive and language scores. It was hypothesized that preterm infants exposed to higher word counts would have higher cognitive and language scores at 7 and 18 months' corrected age.

METHODS: This prospective cohort study included 36 preterm infants with a birth weight ≤1250 g. Sixteen-hour recordings were made in the NICU by using a digital language processor at 32 and 36 weeks' postmenstrual age. Regression analyses were performed on adult word count per hour, with Bayley-III measures correcting for birth weight.

RESULTS: Adult word counts in the NICU were positively correlated with 7- and 18-month Bayley-III scores. For the 32-week recording, in regression analyses adjusting for birth weight, adult word count per hour independently accounted for 12% of the variance in language composite scores ($P = .04$) and 20% of the variance in expressive communication scores at 18 months ($P = .008$). For the 36-week recording, adult word count per hour independently accounted for 26% of the variance in cognitive composite scores at 7 months ($P = .0049$).

CONCLUSIONS: Increased amount of parent talk with preterm infants in the NICU was associated with higher 7- and 18-month corrected age Bayley-III language and cognitive scores. These findings offer an opportunity for language intervention starting in the NICU. *Pediatrics* 2014;133:e578–e584