Usefulness of early neurodevelopmental testing for high-risk infants

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Early detection of developmental problem for high-risk infants with improved survival rate has been emphasized. The purpose of this study was identifying the significance of the 12-month developmental assessment in high-risk infants by comparing their 12 month and later childhood development. After receiving neonatal intensive care, 146 patients underwent the Bayley test at 12 months of age and retook the same test at 24-36 months. Changes in mental developmental index (MDI) and psychomotor developmental index (PDI) were assessed and <85 scores of indices were defined as abnormal. At 12 months, 35 had normal development, 45 had motor developmental delay (MDI normal, PDI<85), 7 had mental developmental delay (MDI<85, PDI normal), and 59 had global delay (MDI & PDI<85). At 24-36 months, 50 had normal development, 10 had motor delay, 16 had mental delay, and 69 had global delay. Out of 35 patients with normal development at 12 months, 27 showed normal development even after that, and 46 of 59 patients with global delay showed a global delay (p<0.001). Among 45 patients with motor delay at 12 months, 21 showed normal development, 6 motor delay, 4 mental delay, and 13 global delay at 24-36 months. All 7 patients who had delayed mental development at 12 months showed global delay at 24-36 months of age. The 12-month development of high-risk infants was associated with later developmental status, especially in term infants. Considering the importance of early intervention for delayed development, the 12-month Bayley test of high-risk infants may be useful.

Biography
So-Hee Eun has completed her PhD from Chonbuk National University, South Korea and Postdoctoral studies from Washington University School of Medicine. She is the Director of Pediatric Neurology at Korea University Ansan Hospital, South Korea.

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