

# This Month In **The JOURNAL** of **PEDIATRICS**

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## Listen up: Follow-up of failed neonatal hearing screening is key

—Sarah S. Long, MD

In this issue of *The Journal*, Holster et al from Sophia Children's Hospital Erasmus Medical Center in Rotterdam report results of a retrospective cohort study over almost a decade of neonatal hearing screening tests, and follow-up of infants with positive tests with formal auditory brainstem response (ABR) testing, physical examination, and tympanometry. During the study period, the method of screening was changed from a behavioral observation test to otoacoustic emission (OAE) testing for healthy infants, and to automated ABR (AABR) test for infants in the neonatal intensive care unit (NICU). These screening tests are in line with recommendations of the American Academy of Pediatrics.

The first remarkable strength of the study is that more than 98% of infants born in the Netherlands had screening performed. And in Rotterdam, more than 98% of infants referred because of failed screening tests actually were seen and evaluated. Authors ascribe adherence with follow-up to frequent communications between screeners from well-baby clinics and audiologists, which included monthly discussion of all referred patients at joint meetings.

The investigation showed that OAE and AABR testing had remarkably higher positive predictive value than the 2% for behavioral observation screening. The current program also led to intervention at a younger age than previously (8 months vs. 15-18 months). Using current screening methods, 58% of infants who failed screening tests had sensorineural hearing loss (SNHL) and 20% had permanent conductive hearing loss. Not surprisingly, positive predictive value of screening for SNHL was higher for failing NICU screening (71%) than failing well-baby clinic screening (54%).

Although genetic (syndromic and nonsyndromic) etiologies were pursued—and found—in some infants, intrauterine infections were pursued only for clinically apparent reasons. With these limitations, just over one-half of infants with hearing loss had etiology determined, which was predominantly genetic.

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## HTLV-1 neurologic disease can begin in childhood

—Sarah S. Long, MD

In a Peruvian family cohort program following children born to mothers infected with HTLV-1, a cross-sectional study using standardized history and neurologic examination of 58 children infected with HTLV-1 and 42 uninfected children was performed and findings compared. The study is imperfect, due to limitations of sample size and incomplete application of study methodology, which precludes meaningful statistical comparisons between groups. Findings show previously unrecognized abnormalities of neurologic examination (especially hyperreflexia of the lower extremities and clonus) in many children infected with HTLV-1. The study, which included a standardized neurologic examination by physicians blinded to HTLV-1 status, stands alone, providing high quality data. This report together with future cohorts from other areas in which HTLV-1 is endemic would lend to meta-analysis in order to validate early findings and risk factors for progression of neurologic disease and to push prevention and development of treatment in childhood.

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