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The LEA Grating test in assessing detection grating acuity in normal infants less than four months of age

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Background: This conference aims to present the study, "The LEA Grating test in assessing detection grating acuity in normal infants less than four months of age", aimed to assess binocular detection grating acuity using the LEA Gratings test to establish age-related norms in healthy infants during their first three months of life.

Method: In this prospective, longitudinal study of healthy infants with clear red reflex at birth, responses to gratings were during the 1st, 2nd and 3rd months of age using LEA Gratings at a distance of 28 cm. The results were recorded as detection grating acuity values, which were arranged in frequency tables and converted to a one-octave scale for statistical analysis. For the repeated measurements, analysis of variance (ANOVA) was used to compare the detection grating acuity results between different ages.

Results: A total of 133 infants were included. The binocular responses to gratings showed development toward higher mean values and spatial frequencies, ranging from 0.55 ± 0.70 cycles per degree (cpd), or 1.74 ± 0.21 logMAR, in month 1 to 3.11 ± 0.54 cpd, or 0.98 ± 0.16 logMAR, in the 3rd month. Repeated ANOVA indicated differences among grating acuity values in the three age groups.

Conclusions: The LEA Gratings test allowed assessment of detection grating acuity and its development in a cohort of healthy infants during their first three months of life.

Notes: