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(archive no: 683) -- in file Department of Otolaryngology-Head and Neck Surgery, University of Iowa, Iowa City 52242 The speech perception performance of 10 congenitally deaf and 3 postlingually deafened children who received the Cochlear Corporation multichannel cochlear implant was examined and compared. The children were tested preimplant and at 6-month intervals up to 2 years using the Monosyllable-Trochee-Spondee test (MTS), the Word Intelligibility by Picture Identification test (WIPI), and Phonetically Balanced Kindergarten (PB-K) or Northwestern University List 6 (NU-6) word lists. The postlingually deafened children exhibited significantly improved performance on open- and closed-set tests of word recognition after 6 months of implant use, a pattern similar to that of postlingually deafened adult implant users. In contrast, the congenitally deaf children did not exhibit measurably improved performance on speech perception tests until after 12 months or more of implant use. With as much as 18-24 months of use, however, some congenitally deaf children demonstrated limited open-set word recognition RefMgr field[1]: Journal RefMgr field[8]:

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AD: Department of Otolaryngology-Head and Neck Surgery, Indiana University School of Medicine, Indianapolis 46202 AB: The speech perception abilities of 19 children with onset of deafness before age 3 years was examined after they received the Nucleus multichannel cochlear implant. The children were divided into two groups based on age at onset of deafness: children with congenital deafness (n = 8) and children with onset of deafness after birth but before age 3 (n = 11). There was no statistically significant difference between the scores of the two groups of subjects on 12 of the 13 speech perception tests administered. This finding suggests that children who are born deaf have the potential to derive the same benefit from cochlear implants as do children who have had some exposure to spoken language before the onset of their deafness. Examination of performance in terms of communication mode revealed that prelingually deafened children with implants who used oral communication obtained significantly higher scores on only 2 of the 13 speech perception measures than did children who used total communication. The data suggest that communication mode does not appear to account for large differences in speech perception performance among prelingually deafened children with multichannel cochlear implants RefMgr field[1]: Journal RefMgr field[8]:

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for the multichannel than for the single- channel users. The performance of the children with the single- channel implant on the speech perception and production measures reached a plateau by 1.5 years post implant, whereas the children using the multichannel device continued to show improvement after 2 or more years of implant use. Changes in language were limited over time with no obvious difference in performance as a function of type of implant RefMgr field[1]: Journal RefMgr field[8]:

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