Children with cochlear implants appear to achieve similar educational and employment levels as peers

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Deaf children who receive cochlear implants appear more likely to fail early grades in school, but they ultimately achieve educational and employment levels similar to their normal-hearing peers, according to a report in the April issue of *Archives of Otolaryngology-Head & Neck Surgery*.

"For profoundly deaf children, cochlear implantation with rehabilitation is the recommended treatment to provide auditory function and facilitate proficiency in oral communication," the authors write as background information in the article. "In an ideal situation, cochlear implantation should also allow recipients to integrate into the hearing world and improve their quality of life; however, these outcomes can be difficult to measure."

Investigating educational and employment status is one way of assessing quality of life, the authors note. Frederic Venail, M.D., Ph.D., of Centre Hospitalier Universitaire Gui de Chauliac, France, and colleagues interviewed the parents of 100 children who were deaf before they began to speak, received cochlear implants before age 6 and had at least four years of follow-up (average follow-up, 10.6 years). Of the 74 patients without additional disabilities, 24 were age 8 to 11, 24 were age 12 to 15, 18 were age 16 to 18 and eight were older than 18 years.

Most children who did not have additional disabilities received

mainstream schooling (67 percent to 83 percent of the 74 children, depending on the age group). Nineteen or 26 percent experienced delays in acquiring reading and writing skills, 39 (53 percent) experienced grade failures and, compared with the age-matched general French population, they experienced a mild delay in educational placement.

"The number of grade failures was associated with communication mode at the time of the survey," the authors write, with those communicating orally having fewer failures than those who used sign language or a combination of the two. "Age at implantation, preoperative communication mode and educational support influenced the final communication mode."

In the group of eight participants older than 18, five had a high school diploma (62 percent, vs. 53 percent of the general population), three had pursued vocational training, four had a university-level education and one was employed with a master's degree.

Among the participants with other disabilities, level of academic achievement and employment status varied. "Mainstreaming is not always possible, and specialized schools are often used," the authors write. "For these cochlear implant recipients, vocational education may provide a valuable alternative, and most still benefit from cochlear implants."

"Prelingually deaf children without additional disabilities achieve satisfactory educational and employment successes after cochlear implantation, especially if the cochlear implant allows for the use of oral communication," the authors conclude. "If delays in writing and reading skills and grade failures are commonly observed, perhaps as a consequence of the auditory deprivation before cochlear implantation, early cochlear implantation should reduce these delays, and further studies are required to address this point."

More information: Arch Otolaryngol Head Neck Surg. 2010;136[4]:366-372