

Bone-anchored hearing aids help youth with single-sided deafness

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Surgically implanted hearing aids anchored to the skull bone appear to be a durable treatment option that noticeably improves hearing among children with deafness in one ear, according to a report in the February issue of *Archives of Otolaryngology -- Head & Neck Surgery*.

Single-sided deafness, also known as profound unilateral sensorineural hearing loss, affects between 0.1 percent and 3 percent of children, according to background information in the article. The condition is often associated with poor performance in school, learning difficulties and behavioral problems, often attributed to the children's inability to perform well in noisy conditions. Traditional, external hearing aids may improve comprehension and performance, but compliance is typically low, especially outside the classroom. "Thus, treatment options for profound unilateral sensorineural hearing loss in children are limited, thereby creating a source of frustration and a need for alternative treatments," the authors write.

"In an effort to provide a durable treatment option, the bone-anchored hearing aid has been explored for use in children with single-sided deafness," write Lisa Christensen, Au.D., of Arkansas Children's Hospital, Little Rock, and colleagues. The researchers reviewed the charts of 23 children and teens (age range 6 to 19, average age 12.6) with single-sided deafness who received bone-anchored [hearing aids](#) over a three-year period. Each surgery was performed in two stages with at least six months in between and patients were fitted with one of two types of bone-anchored hearing aid processors two weeks after the

second stage. Hearing tests were conducted and each patient and a parent or guardian were asked to complete a questionnaire about listening difficulties before and after the fitting.

Scores on both hearing tests and questionnaires improved significantly following surgery. Both children (seven patients younger than 13) and teens (16 patients) demonstrated improvements in hearing. The complication rate was 17 percent, with complications being more common in teenagers and including skin reactions and lost fixtures.

"In conclusion, the treatment of [children](#) and teenagers with profound unilateral sensorineural [hearing](#) loss has been frustrating owing to the known disability associated with this condition and to a lack of acceptance and benefit of traditional amplification techniques," the authors write.

More information: Arch. Otolaryngol Head Neck Surg. 2010;136[2]:175-177.

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