Title: Complications and Parent Satisfaction in Pediatric Osseointegrated Bone Conduction Hearing Implants

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ABSTRACT

Objectives: To assess long-term complication rate and patient satisfaction of osseointegrated bone conduction hearing implants (OBCHI).


Results: 45 subjects were identified with 0.3 to 10.4 years of follow-up. The mean/median age and age range at implant were 9.0/7.8 and 1.7 to 19.1 years. The underlying hearing loss for the cohort included: conductive (N=30), sensorineural (N=7) and mixed (N=8) hearing loss. Conductive hearing loss, caused by aural atresia (62.9), was the most common indication for implantation. 58 complications occurred in 29 subjects, most related to skin infection or overgrowth. 17 events required revision surgery and 18 required oral antibiotics and/or office-based cauterization. Children under the age of 5 were more likely to have failure of osseointegration or require revision surgery. Parents of 33 subjects underwent a phone interview; 76% rated the overall satisfaction as satisfied or very satisfied.

Discussion: A large percentage of children undergoing OBCHI develop postoperative complications and up to 44% require revision surgery, a figure higher than generally reported, and higher than in adults. No factors were found to adequately explain the higher complication rates in children compared to adults. Despite the occurrence of complications, parents viewed this device as satisfactory from many perspectives.