

Active transcutaneous bone conduction implant: audiological results in paediatric patients with bilateral microtia associated with external auditory canal atresia.

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Abstract

OBJECTIVE: To describe, in terms of functional gain and word recognition, the audiological results of patients under 18 years of age implanted with the active bone conduction implant, Bonebridge™.

DESIGN: Retrospective case studies conducted by reviewing the medical records of patients receiving implants between 2014 and 2016 in the public health sector in Chile.

STUDY SAMPLE: All patients implanted with the Bonebridge were included (N = 15). Individuals who had bilateral conductive hearing loss, secondary to external ear malformations, were considered as candidates.

RESULTS: The average hearing threshold one month after switch on was 25.2 dB (95%CI 23.5-26.9). Hearing thresholds between 0.5 and 4 kHz were better when compared with bone conduction hearing aids. Best performance was observed at 4 kHz, where improvements to hearing were observed throughout the adaptation process. There was evidence of a significant increase in the recognition of monosyllables.

CONCLUSIONS: The Bonebridge implant showed improvements to hearing thresholds and word recognition in paediatric patients with congenital conductive hearing loss.