Long-term quality of life with a percutaneous implant for bone conduction hearing

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Introduction

Hearing-related quality of life (HRQoL) is known to improve with a BCD for specific indications. However, little has been published about long-term HRQoL, change in quality of life over time and differences in quality of life between different indications.

Objective

To evaluate long-term HRQoL outcomes and device usage in patients with a BCD

Material & Methods

In two previously conducted clinical trials¹ ² on BCD implantation (Ponto™ system), device use, and the Glasgow Health Status Inventory (GHSI) were assessed in 75 patients at baseline, 6 months and 36 months. The GHSI determines the effect of a health problem on quality of life at the time the GHSI is completed. Scores range from 0 to 100 with higher scores indicating higher quality of life.

GHSI scores and device use at 36 months, and changes over time, were evaluated for all patients as a whole, and also in four subgroups based on indication:

1a) Unilateral hearing loss – conductive/mixed (n=22)
1b) Unilateral hearing loss – single-sided deafness (n=14)
2a) Bilateral hearing loss fitted with one hearing device (n=16)
2b) Bilateral hearing loss fitted with two hearing devices (n=23)

Results

Device use

• 36 months: mean use 12.8 h/day (range: 0-18)
• Average usage higher in patients with bilateral hearing loss (Δ 4.3h)
• No changes over time

GHSI scores per subgroup

Unilateral versus bilateral hearing loss

GHSI scores at baseline, 6 months and 36 months for the four subgroups

Unilateral hearing loss: conductive/mixed versus SSD

Bilateral hearing loss: unilateral versus bilateral fitting

Discussion

• New insights into long-term HRQoL
• Prospectively collected data
• Large sample size
• GHSI: most improved patients with bilateral hearing loss

Conclusion

• Postoperative GHSI scores are consistent over time
• GHSI scores improve after BCD implantation
• Patients with bilateral hearing loss
• Use their BCD more frequently than patients with unilateral hearing loss
• Have worse HRQoL at baseline, but similar HRQoL after BCD implantation, compared to patients with unilateral loss

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References