# Decisional conflict in parents considering bone-anchored hearing device in children with unilateral aural atresia

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## Abstract

Objectives: The benefits of bone-anchored hearing devices (BAHD) in children with unilateral aural atresia are controversial. We sought to determine whether there is parental decisional conflict surrounding elective placement of BAHD for this indication.

Study Design: Prospective cohort study

Methods: Caregivers of pediatric patients with unilateral aural atresia and normal contralateral ear undergoing BAHD consultation were prospectively enrolled. All consultations were carried out by one pediatric otolaryngologist in a consistent manner. Afterwards, the participants completed a demographic form and the Decisional Conflict Scale (DCS).

Results: Our preliminary results included 23 caregivers; 17 mothers and 6 fathers of 15 male (65.2%) and 8 female (34.8%) children. The median DCS score was 15.63 (SE = 4.21). Significant decisional conflict (score ≥25) was found in 10 participants (43.5%). The median DCS score in the group choosing surgery was 5.47, and 28.13 in those who did not choose surgery. The median DCS score for mothers was 25 and for fathers the median score was 3.91.

Conclusion: Many parents experienced significant decisional conflict when considering BAHD in children with unilateral aural atresia in our study population. Future research should explore the impact of significant decisional conflict on health outcomes.

## Methods

### REB approval

Informed Consent

Demographics

**Decisional Conflict Scale (DCS)**

Data Analysis

## Results

### Demographics:

- 23 consecutive parents (17 mothers, 6 fathers)
- Child ages: 3-12 years (mean = 5.65; SD = 0.56)
- Child gender: 15 (65.2%) male; 8 (34.8%) female
- Surgical history: 5 (21.7%) had previous surgery; 16 (69.6%) had not (2 patients did not specify)
- Knowledge of management options: 12 (54.5%) were aware surgery was an option; 10 (45.5%) were not

### Total Decisional Conflict:

- Median DCS: 15.63 (SE = 4.21; IQR 4.69 – 45.31)
- Number with significant DCS (≥25): 10 (43.5%) – **Figure 3**

### Conflict by surgical decision:

- 10 participants chose BAHD; 12 did not; 1 remained uncertain
- Surgery group: Median DCS = 5.47 (3 participants: DCS≥25)
- Non-surgery: Median DCS = 23.44 (6 participants: DCS≥25)
- Mann Whitney U = 39, Z = -1.391, P = .164

### Other Factors:

- Relationship with child trend toward significance
- Mann Whitney U = 29, Z = 1.391, P = .164 (not significant)

## Discussion

**BAHD in bilateral aural atresia:**

- Significant ↑ in PTA + SRT
- 100% of surveyed Canadian pediatric otolaryngologists recommend BAHD for this indication

**BAHD in unilateral aural atresia:**

- No definitive audiologic benefits
- Evidence of improved quality of life

### Surgical Decision:

- Previous study: >1/10 candidates for BAHD (all-comers) declined for reasons including aesthetic, concerns of efficacy
- 52% of our patients elected not to proceed with surgery

### Decisional Conflict:

- Few previous studies in children
- 10 patients: significant decisional conflict in our study (DCS≥25)
- We found no significant associations influencing DCS
- Trend toward more conflict in those declining surgery
- Trend toward more conflict in mothers than fathers – opposite to findings in previous study of DCS in hypospadias repair

### Limitations:

- Small sample size
- Only included one surgeon (may also be a strength)
- Did not include newer, non-percutaneous technologies i.e. Bonebridge™ or BAHA® Attrac

## Conclusion

Significant decisional conflict is experienced by a large proportion of parents considering BAHD for their child with unilateral aural atresia. Those parents with more decisional conflict tended to be less likely to proceed with surgery, although this trend did not reach statistical significance.

## Selected References