Communication Mode and Attention to Speech After Cochlear Implantation

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Conflicts of interest: None

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Communication Mode

Total
• Uses sign as a bridge to spoken language

Oral
• Promotes listening skills for improved speech perception
Does OC lead to better speech perception?

• Studies supporting...
  – Miyamoto et al (1999)
Possible Mechanism

OC → Listening → Speech Perception
Research Question

OC

Listening

TC

Listening
Procedure
Procedure
## Subjects

<table>
<thead>
<tr>
<th></th>
<th>TC (9)</th>
<th></th>
<th>OC (12)</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Range</td>
<td>Mean</td>
<td>Range</td>
</tr>
<tr>
<td>Age (months)</td>
<td>20.5</td>
<td>11.2 – 30.5</td>
<td>21.3</td>
<td>12.3 – 27.2</td>
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<tr>
<td>CI Use (months)</td>
<td>16.6</td>
<td>8.3 – 27.6</td>
<td>16.9</td>
<td>7.6 – 24.3</td>
</tr>
<tr>
<td>PTA (dB SPL)</td>
<td>108.6</td>
<td>67 – 118</td>
<td>110.8</td>
<td>93 – 118</td>
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</tbody>
</table>
Results

Attention to speech

ATS vs. Speech Perception

Sound/Silent Diff (s)

GAEL-P 2 years post-CI
TC vs. OC Speech Perception

- Cannot conclude that OC leads to better listening and then speech perception.
- Better listening may influence parents to select OC.
TC vs. OC Speech Perception

• Some children switch communication modes

Comm. Mode at Test

<table>
<thead>
<tr>
<th></th>
<th>TC (3)</th>
<th>OC (15)</th>
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<tbody>
<tr>
<td>Score</td>
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</table>

CI2016
TORONTO
Research Question

OC → Listening
TC → Listening
Research Question

OC

TC

Listening

Listening
Summary and Conclusions

• OC showed better attention to speech than TC
  – However, the causative relationship is unclear
  – Parents may choose and switch communication modes based on what the child does
  – May result in selection biases when comparing OC and TC
  – Early auditory skills and reasons for choosing communication modes must be factored in when assessing their effects
Summary and Conclusions

• Attention to speech correlated with later speech perception
  – Findings support importance of listening skills