Aetiology and Outcomes in Paediatric Reimplantation

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Annual Reimplants

• 559 children / 747 implants – 7.3%

• 55 episodes 13 bilateral CI / 42 on unilateral CI
European Consensus Statement on Cochlear Implant Failures and Explantation [ECSCIFE] 2005

Implanted Device

<table>
<thead>
<tr>
<th>Clinical Benefit</th>
<th>In Specification</th>
<th>Functioning Device (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No or Reduced</td>
<td>Out of Specification</td>
<td>Characteristics Decrement (B1)</td>
</tr>
<tr>
<td>Clinical Benefit</td>
<td>In Specification</td>
<td>Performance Decrement (B2)</td>
</tr>
<tr>
<td></td>
<td>Out of Specification</td>
<td>Device Failure (C)</td>
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Explanted device

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<td>Clinical Benefit</td>
<td>Device Failure (C)</td>
</tr>
<tr>
<td>No Clinical Benefit</td>
<td>Medical Reason (D)</td>
</tr>
<tr>
<td>Medical Problem</td>
<td>Medical Reason (D)</td>
</tr>
</tbody>
</table>

Loss of follow up

| Device is lost to Follow up (E) |

Classification of Failures

- Medical [D]  
- Device failure [C]  
- Device failure trauma [C]  
- Performance decrement [B2]
Outcomes

• **Category of Auditory Performance (CAP)**
  – 13 bilateral - continued improvement
  – 3 unilateral reduced performance
  – CAP was not compromised when unilateral CI group were analysed separately.

• **Meaningful Auditory Integration Scale (MAIS)**
  – School  pre 70 [36.5-95]  post Cir 85 [55-97.75]
Conclusion & Comments

- Ci-r is a safe procedure, no surgical complications
- Rates of trauma are greater in younger implanted children.
- 25% of failures had a clear history of trauma
- Gradual decremental decline can be difficult to identify. A child not progressing should raise concerns.
- Surgical time needs to be factored in for reimplants in the overall work load.
Thank you

Thanks to the team who have contributed to the study