TITLE: Physiotherapy Interventions for Children with Sensorineural Hearing Loss: Clinical Effectiveness and Guidelines

DATE: 30 May 2016

RESEARCH QUESTIONS

1. What is the clinical effectiveness of physiotherapy interventions in pediatric patients with sensorineural hearing loss?

2. What are the evidence-based guidelines regarding the use of physiotherapy interventions in pediatric patients with sensorineural hearing loss?

KEY FINDINGS

One systematic review was identified regarding the clinical effectiveness of physiotherapy interventions in pediatric patients with sensorineural hearing loss.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2006 and May 14, 2016. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

SELECTION CRITERIA

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.
Table 1: Selection Criteria

<table>
<thead>
<tr>
<th>Population</th>
<th>Pediatric patients (under 18 years of age) with sensorineural hearing loss (subgroup of interest: severe sloping sensorineural hearing loss)</th>
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</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>Physiotherapy interventions (e.g., balance training, vestibular training)</td>
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| Comparator | Q1: No treatment  
Q2: No comparator required |
| Outcomes | Q1: Clinical benefits and harms (e.g., effect on balance or hearing loss)  
Q2: Evidence-based guidelines |
| Study Designs | Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, evidence-based guidelines |

RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

One systematic review was identified regarding the clinical effectiveness of physiotherapy interventions in pediatric patients with sensorineural hearing loss. No relevant health technology assessments randomized controlled trials, non-randomized studies, or evidence-based guidelines were identified.

Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

One systematic review\(^1\) was identified regarding the effect of exercise intervention on vestibular related impairments in hearing-impaired children. The review identified two studies for inclusion. The authors concluded that exercise programs that focused on visual-motor and somatosensory abilities were more effective than placebo or traditional exercises for improving vestibular related deficits in children with hearing-impairment.\(^1\)
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses

Randomized Controlled Trials
No literature identified.

Non-Randomized Studies
No literature identified.

Guidelines and Recommendations
No literature identified.

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APPENDIX – FURTHER INFORMATION:

Systematic Reviews – Type of Hearing Loss Not Specified


Review Articles

See: Treatment, page 4