Continuous Perioperative Halo Traction for Partial Correction of the Spine in Pediatric Patients: Clinical Effectiveness and Guidelines
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Research Questions

1. What is the comparative clinical effectiveness of continuous versus daytime perioperative halo traction for partial correction of the spine in pediatric patients?

2. What are the evidence-based guidelines regarding the use of perioperative halo traction for partial correction of the spine in pediatric patients?

Key Findings

No relevant literature was identified regarding the comparative clinical effectiveness of continuous versus daytime perioperative halo traction for partial correction of the spine in pediatric patients. No evidence-based guidelines were identified regarding the use of perioperative halo traction for partial correction of the spine in pediatric patients.

Methods

A limited literature search was conducted by an information specialist on key resources including Medline via OVID the Cochrane Library, the University of York Centre for Reviews and Dissemination (CRD) databases, the websites of Canadian and major international health technology agencies, as well as a focused Internet search. The search strategy was comprised of both controlled vocabulary, such as the National Library of Medicine’s MeSH (Medical Subject Headings), and keywords. The main search concepts were halo traction and pre-, peri-, or post-operative. 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, 2014 and November 22, 2019. Internet links were provided, where available.

Selection Criteria

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

Table 1: Selection Criteria

<table>
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<th>Population</th>
<th>Pediatric patients with spinal or neurological congenital abnormalities (e.g., scoliosis) requiring elective spinal surgery</th>
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| Intervention | Q1. Continuous perioperative halo traction (i.e., 24/7 use)  
Q2. Perioperative halo traction                                      |
| Comparator  | Q1. Daytime perioperative halo traction (e.g., halo traction only during the day and no traction during nighttime)  
Q2. No comparator                                                   |
| Outcomes    | Q1. Clinical benefits and harms (e.g., recovery time, neurological complications)  
Q2. Recommendations for use (e.g., care and maintenance of pediatric halo traction patients discharged from hospital [home care guidelines], protocols for setting up and maintaining halo-traction in the home, any guidance on patients traveling form the hospital to the home) |
| Study Designs | Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, and evidence-based guidelines |
Results

No relevant literature was identified regarding the comparative clinical effectiveness of continuous versus daytime perioperative halo traction for partial correction of the spine in pediatric patients. No evidence-based guidelines were identified regarding the use of perioperative halo traction for partial correction of the spine in pediatric patients.

References of potential interest are provided in the appendix.

Overall Summary of Findings

No relevant literature was identified regarding the comparative clinical effectiveness of continuous versus daytime perioperative halo traction for partial correction of the spine in pediatric patients. No evidence-based guidelines were identified regarding the use of perioperative halo traction for partial correction of the spine in pediatric patients. Therefore, no summary can be provided.

References Summarized

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

No literature identified.

Randomized Controlled Trials

No literature identified.

Non-Randomized Studies

No literature identified.

Guidelines and Recommendations

No literature identified.
Appendix — Further Information

Systematic Reviews and Meta-analyses — Unclear Comparator


Non-Randomized Studies

Before and After Studies


   PubMed: PM25310398

   PubMed: PM25668334

   PubMed: PM23942045

   PubMed: PM24249208

**Alternative Comparator**

   PubMed: PM30475319

   PubMed: PM25398036

**Clinical Practice Guidelines**

   PubMed: PM30994582

**Review Articles**

   PubMed: PM31053309

   PubMed: PM25207730
Additional References