TITLE: Pediatric Laryngeal Tube Airway Devices: Clinical Effectiveness and Guidelines

DATE: 08 April 2015

RESEARCH QUESTIONS

1. What is the clinical effectiveness of pediatric laryngeal tube airways for patients requiring airway stabilization?

2. What are the evidence-based guidelines regarding the use of pediatric laryngeal tube airways for patients requiring airway stabilization?

KEY FINDINGS

One randomized controlled trial and two non-randomized studies were identified regarding the clinical effectiveness of pediatric laryngeal tube airways for patients requiring airway stabilization.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2015, Issue 3), 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, 2010 and March 26, 2015. 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.

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<th>Table 1: Selection Criteria</th>
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<td><strong>Population</strong></td>
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<td><strong>Intervention</strong></td>
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| **Comparator**              | None
|                              | Laryngeal mask airway
|                              | Combitube |
| **Outcomes**                | Clinical effectiveness |
|                              | Clinical benefit |
|                              | Guidelines and recommendations |
| **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 randomized controlled trial (RCT) and two non-randomized studies were identified regarding the clinical effectiveness of pediatric laryngeal tube airways for patients requiring airway stabilization. No relevant health technology assessments, systematic reviews, meta-analyses, or evidence-based guidelines were identified.

Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

One RCT\(^1\) compared the effectiveness of pediatric laryngeal tube (LT) and laryngeal mask airways (LMA) for positive pressure ventilation in patients in different head and neck positions. Leak pressures were significantly higher for the LT in all positions. The authors concluded that LT might be the most appropriate choice for anesthetized children requiring ventilation. Two non-randomized studies\(^2,3\) examined out-of-hospital pediatric airway management, including the use of LT, in the United States. The use of alternate airways, including LT, was reported to be successful in 87% of cases.\(^3\) Results specifically related to pediatric LT were not presented in the abstracts.
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses
No literature identified.

Randomized Controlled Trials


Non-Randomized Studies


Guidelines and Recommendations
No literature identified.

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APPENDIX – FURTHER INFORMATION:

Randomized Controlled Trials – Simulation


Non-Randomized Studies – Simulation


Review Articles


Additional References