Sugammadex for the Recovery of Neuromuscular Blockade in Adult Patients: Clinical Effectiveness and Cost-Effectiveness – An Update
Research Questions

1. What is the clinical effectiveness regarding the use of sugammadex for the recovery of neuromuscular blockade in adult patients?

2. What is the cost-effectiveness regarding the use of sugammadex for the recovery of neuromuscular blockade in adult patients?

Key Findings

Five systematic reviews (four with meta-analyses), 13 randomized controlled trials, and three non-randomized studies were identified regarding the clinical effectiveness of sugammadex in adult patients who are recovering from neuromuscular blockade.

Methods

This report updates a literature search of a previous CADTH report. For the current report, a limited literature search was conducted by an information specialist on key resources including PubMed, 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 concept was sugammadex. 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 April 26, 2016 and May 27, 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>
<thead>
<tr>
<th>Table 1: Selection Criteria</th>
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<tr>
<td><strong>Population</strong></td>
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<td><strong>Intervention</strong></td>
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<td><strong>Comparator</strong></td>
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Outcomes
Q1: Clinical effectiveness (e.g., recovery time, time to extubation, post-operative residual paralysis); safety (e.g., renal function, bleeding); benefits/harms (e.g., pulmonary complications, re-intubation)
Q2: Cost-effectiveness

Study Designs
Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, and economic evaluations

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 economic evaluations.

Five systematic reviews (four with meta-analyses), 13 randomized controlled trials, and three non-randomized studies were identified regarding the clinical effectiveness of sugammadex in adult patients who are recovering from neuromuscular blockade. No relevant health technology assessments or economic evaluations were identified.

Additional references of potential interest are provided in the appendix.

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses


Randomized Controlled Trials


Non-Randomized Studies


Economic Evaluations

No identified literature.
Appendix — Further Information

Previous CADTH Reports


Randomized Controlled Trials

Neuromuscular Blockade Not Specified in Patient Population


Children Included in Patient Population


Non-Randomized Studies

Neuromuscular Blockade Not Specified in Patient Population


Review Articles


Additional References