TITLE: Large Volume Crystalloid Fluid Infusion for Adults with Moderate to Severe Sepsis: Clinical Effectiveness and Guidelines

DATE: 17 June 2015

RESEARCH QUESTIONS

1. What is the clinical effectiveness of large volume crystalloid fluid infusion versus smaller volume crystalloid fluid infusion with vasopressors in adult patients with moderate to severe sepsis?

2. What are the evidence-based guidelines regarding fluid infusion for adult patients with moderate to severe sepsis?

KEY FINDINGS

One meta-analysis regarding volumes of crystalloid fluid infusion in adult patients with moderate to severe sepsis, and one evidence-based guideline regarding fluid infusion for adult patients with moderate to severe sepsis were identified.

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, ECRI, Canadian and major international health technology agencies, as well as a focused Internet search. To address research question 1, no filters were applied to limit the retrieval by study type. To address research question 2, methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses and guidelines. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2010 and June 10, 2015. 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>
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<tr>
<th>Table 1: Selection Criteria</th>
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<tr>
<td><strong>Population</strong></td>
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<td>Adult patients with moderate to severe sepsis (including shock)</td>
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<td><strong>Intervention</strong></td>
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<td>Large volume crystalloid fluid resuscitation (&gt;30 mL/kg)</td>
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<td><strong>Comparator</strong></td>
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<td>Small volume crystalloid fluid resuscitation with early use of vasopressors</td>
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<td><strong>Outcomes</strong></td>
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<td>Safety, clinical effectiveness, patient mortality, improved clinical outcomes, evidence-based guidelines</td>
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<td><strong>Study Designs</strong></td>
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<tr>
<td>Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, and evidence-based guidelines</td>
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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 meta-analysis regarding volumes of crystalloid fluid infusion in adult patients with moderate to severe sepsis, and one evidence-based guideline regarding fluid infusion for adult patients with moderate to severe sepsis were identified. No health technology reports, systematic reviews, randomized controlled trials, or non-randomized studies 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
No literature identified.

Non-Randomized Studies
No literature identified.
Guidelines and Recommendations


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APPENDIX – FURTHER INFORMATION:

Systematic Reviews and Meta-Analyses – Volumes not Specified in Abstract


Non-Randomized Studies – Volumes Unspecified in Abstract


Review Articles


Additional References