TITLE: Post-Operative Anticoagulation of Elderly Surgical Patients with Impaired Renal Function: Clinical Effectiveness and Guidelines

DATE: 09 November 2015

RESEARCH QUESTIONS

1. What is the comparative clinical effectiveness of various low weight molecular heparins for post-operative anticoagulation of elderly (aged ≥ 65 years) surgical patients with impaired renal function?

2. What is the comparative clinical effectiveness of unfractionated heparin versus low weight molecular heparin for post-operative anticoagulation of elderly (aged ≥ 65 years) surgical patients with impaired renal function?

3. What are the evidence-based guidelines regarding post-operative anticoagulation of elderly surgical patients with impaired renal function?

KEY FINDINGS

No relevant literature was identified regarding post-operative anticoagulation of elderly surgical patients with impaired renal function.

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. The search was limited to English language documents published between Jan 1, 2010 and Nov 3, 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 1: Selection Criteria

<table>
<thead>
<tr>
<th>Population</th>
<th>Elderly (aged ≥ 65 years) surgical patients with impaired renal function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>Q1: Any post-operative low weight molecular heparin therapy (e.g., tinzaparin, dalteparin, enoxaparin)</td>
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<tr>
<td></td>
<td>Q2: Post-operative unfractionated heparin</td>
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<td>Q3: Any post-operative anticoagulant therapy</td>
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<tr>
<td>Comparator</td>
<td>Q1: Any alternate post-operative low weight molecular heparin therapy</td>
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<td></td>
<td>Q2: Post-operative low weight molecular heparin</td>
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<td></td>
<td>Q3: No comparator required</td>
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<tr>
<td>Outcomes</td>
<td>Q1 and 2: Clinical effectiveness; harms</td>
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<td></td>
<td>Q3: Evidence-based guidelines</td>
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<tr>
<td>Study Designs</td>
<td>Health technology assessments, systematic reviews, meta-analyses,</td>
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<td></td>
<td>randomized controlled trials, non-randomized studies, evidence-based</td>
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<tr>
<td></td>
<td>guidelines</td>
</tr>
</tbody>
</table>

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.

No relevant health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, or evidence-based guidelines were identified regarding post-operative anticoagulation of elderly surgical patients with impaired renal function.

References of potential interest are provided in the appendix.

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.

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APPENDIX – FURTHER INFORMATION:

Systematic Reviews and Meta-analyses

Post-Operative Not Specified

   See: Key Question 8, pages 120

Elderly Patients Not Specified, Renal Function Not Specified


Randomized Controlled Trials

Elderly Patients Not Specified, Other Operative Status


Non-Randomized Studies

Elderly Patients Not Specified, Renal Disease Not Specified

   PubMed: PM26356708


PubMed: PM21505722

Alternate Comparator


PubMed: PM23336294


PubMed: PM22095136


PubMed: PM22583760


PubMed: PM22672318

Guidelines and Recommendations – Post-Operative Status Not Specified


See: 4.3.1, page 12


See: Adverse Effects of Thromboprophylaxis
Clinical Practice Guidelines – Uncertain Methodology

Elderly Patients Not Specified


See: Appendix B

Review Articles


