TITLE: Knee-High Versus Thigh-High Compression Devices: Comparative Clinical and Cost-Effectiveness

DATE: 13 May 2015

RESEARCH QUESTIONS

1. What is the comparative clinical effectiveness and safety of knee-high compression devices versus thigh-high compression devices for the prevention of post-operative deep vein thrombosis?

2. What is the comparative cost-effectiveness of knee-high compression devices versus thigh-high compression devices for the prevention of post-operative deep vein thrombosis?

KEY FINDINGS

One non-randomized study was identified regarding the clinical effectiveness of knee-high compression devices versus thigh-high compression devices for the prevention of post-operative deep vein thrombosis.

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. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2008 and May 1, 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.

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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>Patients requiring sequential compression devices to prevent deep vein thrombosis after surgical procedures</td>
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<td><strong>Intervention</strong></td>
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<tr>
<td>Knee-high compression devices (excluding compression stockings)</td>
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<td><strong>Comparator</strong></td>
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<td>Thigh-high compression devices</td>
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<td><strong>Outcomes</strong></td>
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<tr>
<td>Q1: Clinical benefit (e.g., reduction in thrombosis), safety</td>
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<td>Q2: Cost-effectiveness</td>
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<tr>
<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, economic evaluations</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 economic evaluations.

One non-randomized study was identified regarding the clinical effectiveness of knee-high compression devices versus thigh-high compression devices for the prevention of post-operative deep vein thrombosis. No relevant health technology assessments, systematic reviews, meta-analyses, or randomized controlled trials were identified.

Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

One non-randomized study\(^1\) was identified regarding the clinical effectiveness of knee-high compression devices versus thigh-high compression devices for the prevention of post-operative deep vein thrombosis. This study reported that knee-length were as effective as thigh-length compression devices for thromboembolism prophylaxis, were easier for staff and patients to use, posed a lower injury risk to patients, and were less expensive.\(^1\) Patients also reported knee-length devices as being more comfortable than thigh-length devices.\(^1\) The study authors concluded that knee-length compression devices are preferable for patients undergoing urology, general, and gynecology surgery.\(^1\)
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


Economic Evaluations
No literature identified.

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APPENDIX – FURTHER INFORMATION:

Systematic Reviews – Calf-Thigh Length Compression versus Plantar Compression


Reviews
