TITLE: Minimally Invasive Endovascular Procedures for the Management of Patients with Peripheral Artery Disease: Clinical and Cost-Effectiveness, and Guidelines

DATE: 31 July 2015

RESEARCH QUESTIONS

1. What is the clinical or cost-effectiveness of percutaneous transluminal angioplasty (PTA) for the treatment of patients with peripheral artery disease?

2. What is the clinical or cost-effectiveness of stents for the treatment of patients with peripheral artery disease?

3. What is the clinical or cost-effectiveness of catheter-based mechanical atherectomy for the treatment of patients with peripheral artery disease?

4. What is the clinical or cost-effectiveness of excimer laser-based atherectomy for the treatment of patients with peripheral artery disease?

5. What are the evidence-based guidelines regarding minimally invasive endovascular procedures for the treatment of patients with peripheral artery disease?

KEY FINDINGS

Two health technology assessments, 36 systematic reviews, 11 economic evaluations and 10 evidence-based guidelines were identified regarding the clinical and cost-effectiveness of minimally invasive endovascular procedures for the treatment of patients with peripheral artery disease.

METHODS

A limited literature search was conducted on key resources including Ovid Medline, 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. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, economic studies, 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 July 27, 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.

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<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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<td><strong>Outcomes</strong></td>
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<td><strong>Study Designs</strong></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, economic evaluations, and evidence-based guidelines.

Two health technology assessments, 36 systematic reviews, 11 economic evaluations and 10 evidence-based guidelines were identified regarding the clinical and cost-effectiveness of minimally invasive endovascular procedures for the treatment of patients with peripheral artery disease.

Additional references of potential interest are provided in the appendix.

Health Technology Assessments


PubMed: PM23074395

Systematic Reviews and Meta-analyses

PubMed: PM25703839

PubMed: PM26023746

PubMed: PM25721067

PubMed: PM26018400

PubMed: PM24638972

PubMed: PM24841052

PubMed: PM24836771

PubMed: PM24959692

PubMed: PM24833157


**Economic Evaluations**


Guidelines and Recommendations


Recommendations for revascularization in patients with femoropopliteal/infrapopliteal lesions, page 2880;
Management of intermittent claudication, page 2883;
4.5.5.2 Therapeutic options, page 2884;
Recommendations for patients with intermittent claudication, page 2884;
Recommendations for the management of critical limb ischaemia, page 2885


PubMed: PM21960485
See: 2.6.3. Recommendations for Critical Limb Ischemia: Endovascular and Open Surgical Treatment for Limb Salvage, page 9

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APPENDIX – FURTHER INFORMATION:

Previous CADTH Reports


Health Technology Assessments – Alternate Indication


Systematic Reviews and Meta-Analyses - Alternate Population


Economic Evaluations - Mixed Intervention


Review Articles


Additional References