



TITLE: Excimer Laser and Stenting for the Treatment of Distal Peripheral Arterial Disease: Clinical Effectiveness and Guidelines

DATE: 10 August 2016

RESEARCH QUESTIONS

1. What is the clinical effectiveness of the use of an excimer laser and stenting for the treatment of distal peripheral arterial disease?
2. What are the evidence-based guidelines regarding the use of excimer laser and stenting for the treatment of distal peripheral arterial disease?

KEY FINDINGS

No relevant literature was identified regarding the use of excimer laser and stenting for the treatment of distal peripheral arterial disease.

METHODS

This report makes use of a literature search developed for a previous CADTH report. The original literature search was conducted in December 2014 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 retrieval by study type. Where possible, retrieval was limited to the human population. The initial search was also limited to English-language documents published between January 1, 2009 and December 17, 2014. For the current report, database searches were rerun on August 2, 2016 to capture any articles published since the initial search date. The search of major health technology agencies was also updated to include documents published since December 17, 2014.

SELECTION CRITERIA

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

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Table 1: Selection Criteria

Population	Adult patients with distal peripheral arterial disease
Intervention	Excimer laser plus stenting (or percutaneous transluminal angioplasty [PTA])
Comparator	PTA with or without stenting; Laser assisted PTA with or without stenting; No active comparator
Outcomes	Q1: Clinical effectiveness (including but not limited to restenosis rates); Harms Q2: Evidence based guidelines
Study Designs	Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, evidence-based guidelines

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 the use of an excimer laser and stenting for the treatment of distal peripheral arterial disease.

References of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

No relevant literature was found regarding the use of an excimer laser and stenting for the treatment of distal peripheral arterial disease; therefore, no summary can be provided.

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

No literature identified.

Guidelines and Recommendations

No literature identified.

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APPENDIX – FURTHER INFORMATION:

Randomized Controlled Trials - Treatment of Restenosis (or Reobstruction)

1. Dippel EJ, Makam P, Kovach R, George JC, Patlola R, Metzger DC, et al. Randomized controlled study of excimer laser atherectomy for treatment of femoropopliteal in-stent restenosis: initial results from the EXCITE ISR trial (EXCimer Laser Randomized Controlled Study for Treatment of Femoropopliteal In-Stent Restenosis). *JACC Cardiovasc Interv.* 2015 Jan;8(1 Pt A):92-101.
[PubMed: PM25499305](#)

Previous CADTH Reports

2. Excimer laser and stenting in patients with distal peripheral arterial disease: a review of the clinical effectiveness, safety, and guidelines [Internet]. Ottawa (ON): Canadian Agency for Drugs and Technologies in Health; 2015 Jan 26. [cited 2016 Aug 9]. (CADTH Rapid Response Reports). Available from: <https://www.cadth.ca/sites/default/files/pdf/htis/jan-2015/RA0723%20Excimer%20Laser%20for%20PAD%20Final.pdf>
3. Minimally invasive endovascular procedures for the management of patients with peripheral artery disease: clinical and cost-effectiveness, and guidelines [Internet]. Ottawa (ON): Canadian Agency for Drugs and Technologies in Health; 2015 Jul 31. [cited 2016 Aug 9]. (CADTH Rapid Response Reports). Available from: <https://www.cadth.ca/sites/default/files/pdf/htis/july-2015/RA0787%20Minimally%20Invasive%20Procedures%20for%20PAD%20Final.pdf>
4. Clinical effectiveness of laser assisted revascularization for patients with peripheral vascular disease [Internet]. Ottawa (ON): Canadian Agency for Drugs and Technologies in Health; 2007 Aug 24. [cited 2016 Aug 9]. (CADTH Rapid Response Reports). Available from: <https://www.cadth.ca/sites/default/files/pdf/htis/Clinical%20Effectiveness%20of%20Laser%20Assisted%20Revascularization%20for%20Patients%20with%20Peripheral%20Vascular%20Dis.pdf>

Additional References

5. Ahmed SM. Role of atherectomy devices in the treatment of lower extremity peripheral arterial disease. *EC Cardiology* [Internet]. 2015 [cited 2016 Aug 9];1.1:1-9. Available from: <https://www.econicon.com/eccy/cardiology-ECCY-01-00001.php>