GENERAL REVIEW| VOLUME 35, P226-233, AUGUST 2016

A Systematic Review of Extracorporeal Shockwave Therapy as a Novel Treatment for Intermittent Claudication

Thomas Cayton, Amy Harwood, George E. Smith, Ian Chetter

Published:June 13, 2016 DOI:https://doi.org/10.1016/j.avsg.2016.02.017

Background

Extracorporeal shockwave therapy (ESWT) is emerging as a potential new treatment option for a variety of clinical scenarios including promotion of wound healing and symptom control in end-stage ischemic heart disease. A number of small trials have investigated ESWT in the management of peripheral arterial disease (PAD). A systematic review of the literature was performed investigating the efficacy and potential mechanism of action of ESWT for PAD.

Methods

A systematic review was conducted using MEDLINE and PubMed databases in keeping with the standard reporting guidelines set by the Preferred Reporting Items for Systematic Reviews and Meta-Analysis group to identify any publications relating to the use of ESWT in PAD.

Results

Systematic literature review identified 5 studies in 4 articles investigating ESWT in the treatment of symptomatic PAD. Although participant numbers within the identified studies were small, significant improvements in pain-free walking distance and maximum walking distance were demonstrated. The mechanism of action is thought to be due to mechanotransduction and subsequent angiogenesis.

Conclusions

ESWT shows promise as a potentially efficacious novel treatment for symptomatic PAD. However, studies to date are small and record heterogeneous outcomes. Appropriately powered, randomized, sham-controlled data including objective clinical outcomes to comprehensively assess the efficacy of this novel treatment modality is still required before determining if ESWT should be brought into routine clinical practice.