TITLE: Manual Lymph Drainage or Intermittent Pneumatic Compression for Adult Patients with Secondary Lymphedema: Clinical Effectiveness

DATE: 8 April 2010

RESEARCH QUESTION:

What is the clinical effectiveness of manual lymph drainage or intermittent pneumatic compression compared to compression bandaging or no intervention for adult patients with secondary lymphedema?

METHODS:

A limited literature search was conducted on key health technology assessment resources, including PubMed, the Cochrane Library (Issue 3, 2010), University of York Centre for Reviews and Dissemination (CRD) databases, EuroScan, international health technology agencies, and a focused Internet search. The search was limited to English language articles published between 1998 and March 2010. Filters were applied to limit the retrieval to systematic reviews, health technology assessments, randomized controlled trials (RCTs), controlled clinical trials, and observational studies. 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.

RESULTS:

HTIS 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 RCTs, controlled clinical trials, and observational studies.

The literature search identified four systematic reviews, one RCT, and one observational study on the clinical effectiveness of manual lymph drainage or intermittent pneumatic compression compared with compression bandaging or no intervention for adult patients with secondary lymphedema.
lymphedema. No health technology assessments or controlled clinical trials were identified. Additional articles of potential interest, including studies of combination therapies, are provided in the appendix.

OVERALL SUMMARY OF FINDINGS:

In general, the identified studies found that compression bandages were effective in decreasing secondary lymphedema. However, conclusions across the identified studies were not consistent concerning the clinical effectiveness of manual lymphatic drainage and pneumatic pump treatments.

Three systematic reviews\(^1,2,3\) focused on treatment for lymphedema resulting from breast cancer surgery. The Finnish review\(^1\) concluded that compression bandages decreased lymphedema and that pneumatic pumps were not effective. Moseley et al.\(^2\) found that manual lymphatic drainage and pneumatic pump treatment were more effective for volume reduction than compression garment wear. Kligman et al.\(^3\) concluded that compression therapy and manual lymphatic drainage might improve established lymphedema. A Cochrane systematic review\(^4\) on any form of lymphedema concluded that manual lymph drainage provided similar benefits to compression sleeves. The combination of compression bandages plus hosiery was considered to be the most effective in reducing limb volume.

The RCT by Dini et al.\(^5\) compared pneumatic compression to no treatment for post-mastectomy lymphedema, and found no difference in limb volume reduction between the groups. The observational study by Berlin et al.\(^6\) followed post-mastectomy patients for five years, comparing compression stockings with pneumatic compression. The study results indicated that all therapies were somewhat beneficial in reducing limb volume; the authors stated that compression stockings were the simplest treatment for postoperative edema.
REFERENCES SUMMARIZED:

Health technology assessments
No literature identified

Systematic reviews and meta-analyses


   Note: This publication is based on a Cancer Care Ontario report, available from: http://www.cancercare.on.ca/common/pages/UserFile.aspx?fileId=14306


Randomized controlled trials


Controlled clinical trials
No literature identified

Observational studies


PREPARED BY:
Health Technology Inquiry Service
Email: htis@cadth.ca
Tel: 1-866-898-8439
APPENDIX – FURTHER INFORMATION:

Systematic reviews and meta-analyses (combination therapy)


Note: *Only the summary is available in English*

Randomized controlled trials (combination therapy)


Controlled clinical trials (combination therapy)


Guidelines and recommendations


See: Management of lymphoedema, pp. 51-68


Review articles


See: Treatment strategies for secondary lymphoedema, pp. 36-46


See: Treatment Strategies, pp.32-42.