

Is physiotherapy an effective treatment for lymphoedema secondary to cancer treatment?



Clinical question

A physiotherapist at Monash Medical Centre wanted to know the most effective physiotherapy treatments for lymphoedema following treatment for breast cancer.



Search question

People undergoing physiotherapy for lymphoedema formed the patient group of interest. Clinical outcomes were reduction or prevention of lymphoedema. A randomised controlled trial comparing physiotherapy treatment to no treatment, placebo, or other conservative treatment would be the most appropriate study design.



Search

The search term “lymph(o)edema” was combined with the general treatment search terms “physical therapy”, “physiotherapy”, “conservative treatment”, “non-invasive treatment” and the more specific treatment terms “complex physical therapy”, “compression sleeve/bandaging/garment”, “manual lymphatic drainage”, “mechanical compression” to identify all English-language controlled trials, meta-analyses and systematic reviews published between January 1970 and August 2000. We electronically searched the Cochrane Library, Best Evidence, MEDLINE, Cumulative Index of Nursing and Allied Health Library (CINAHL), Current Contents and the Physiotherapy Evidence Database (PEDro). We also searched the websites of 12 relevant health organisations, including the National Guidelines Clearinghouse, National Breast Cancer Centre, and Agency for Healthcare Research and Quality.



Summary of findings

Our search identified two systematic reviews,^{1,2} and five randomised controlled trials³⁻⁷ and one non-randomised controlled trial⁸ published subsequently to, or not included in, the systematic reviews.

There are few well-designed randomised controlled trials that examine the effectiveness of physical therapies for lymphoedema. The two identified systematic reviews^{1,2} included uncontrolled studies with methodological problems, and their conclusions cannot be confidently endorsed. Furthermore, as no single validated and widely acceptable outcome measure is available, comparison of results across trials or pooling of results in a meta-analysis is not appropriate.

Some conclusions can be drawn by examining the controlled studies included in the systematic reviews, and the subsequently published randomised^{3,4} and non-randomised⁸ controlled trials. While there is some evidence

that compression garments reduce limb swelling, the addition of other modalities, including multilayer bandaging,⁴ manual lymphatic drainage,^{3,8} pneumatic pumps or electrical stimulation,¹ does not provide additional benefit. However, one randomised controlled trial found that compression sleeves provided only short term benefit (over four weeks),⁶ while the remaining randomised controlled trials reported that compression was no more effective than manual lymphatic drainage⁷ or no active treatment⁵ to reduce lymphoedema.

The randomised controlled trials of Dini et al⁵ and Hornsby⁶ illustrate the importance of appropriate control groups. Both reported that adherence to skin-care guidelines and other self-care protocols reduces lymphoedema as effectively as the addition of active treatment.

Although the International Society of Lymphology⁹ recommends complex physical therapy (skin hygiene, lymph drainage, bandaging, and exercises in treatment and maintenance phases) as the initial treatment for lymphoedema, we found no rigorous evidence to support this.



Outcome

Subsequently published evidence-based clinical practice guidelines¹⁰ support our findings, namely that compression garments are of some but limited value, although they are as effective as other, more resource-intensive methods. Other physical therapies, such as complex physical therapy, pneumatic pumps, rigorous massage and compression bandaging, require further rigorous evaluation before recommendations about their use can be made. These recommendations were incorporated into a lymphoedema service for women in south-east Melbourne.

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