Electromagnetic therapy for treating venous leg ulcers
(Review)

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Electromagnetic therapy for treating venous leg ulcers

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ABSTRACT

Background

Leg ulceration is a common, chronic, recurring condition. The estimated prevalence of leg ulcers in the UK population is 1.5 to 3 per 1000. Venous ulcers (also called stasis or varicose ulcers) comprise 80% to 85% of all leg ulcers. Electromagnetic therapy (EMT) is sometimes used as a treatment to assist the healing of chronic wounds such as venous leg ulcers.

Objectives

To assess the effects of EMT on the healing of venous leg ulcers.

Search methods

For this fourth update, we searched The Cochrane Wounds Group Specialised Register (searched 30 January 2015); The Cochrane Central Register of Controlled Trials (CENTRAL) (The Cochrane Library 2014, Issue 12).

Selection criteria

Randomised controlled trials comparing EMT with sham-EMT or other treatments.

Data collection and analysis

Standard Cochrane Collaboration methods were employed. At least two review authors independently scrutinised search results and obtained full reports of potentially eligible studies for further assessment. We extracted and summarised details of eligible studies using a data extraction sheet, and made attempts to obtain missing data by contacting study authors. A second review author checked data extraction, and we resolved disagreements after discussion between review authors.

Main results

Three randomised controlled trials (RCTs) of low or unclear risk of bias, involving 94 people, were included in the original review; subsequent updates have identified no new trials. All the trials compared the use of EMT with sham-EMT. Meta-analysis of these trials was not possible due to heterogeneity. In the two trials that reported healing rates; one small trial (44 participants) reported that significantly more ulcers healed in the EMT group than the sham-EMT group however this result was not robust to different assumptions about the outcomes of participants who were lost to follow up. The second trial that reported numbers of ulcers healed found no significant difference in healing. The third trial was also small (31 participants) and reported significantly greater reductions in ulcer size in the EMT group however this result may have been influenced by differences in the prognostic profiles of the treatment groups.
Authors’ conclusions

It is not clear whether electromagnetic therapy influences the rate of healing of venous leg ulcers. Further research would be needed to answer this question.

PLAIN LANGUAGE SUMMARY

Electromagnetic therapy (EMT) for treating venous leg ulcers

Venous leg ulcers (which appear as open sores) can be caused by a blockage or breakdown in the veins of the legs. Compression of the leg, using bandages or hosiery (stockings), can help heal most of these ulcers. Electromagnetic therapy is also sometimes offered. Electromagnetic therapy is not a form of radiation or heat, but uses an electromagnetic field to try to promote healing. This review of clinical trials concluded that there is no high quality evidence about whether electromagnetic therapy speeds the healing of venous leg ulcers and its effect is unclear.