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Title Pulsed Radiofrequency Electromagnetic Field for Pain and Wound Therapy

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Aim

To assess the safety, efficacy / effectiveness and cost-effectiveness of pulse radiofrequency electromagnetic field (PRFE) for pain therapy and wound healing

Conclusions and results

Based on the review, there were two meta-analysis, and four randomized control trials (RCTs) identified. The trials were published between 1992 to 2014. Both meta-analysis found that electrical stimulation including PRFE was effective as an adjunct therapy to accelerate wound healing (improved wound size) and reduce pain. All four RCTs also showed that PRFE can be used as an adjunct therapy for pain reduction after surgery or for leg ulcer healing. However, each RCTs concluded that, larger-scale clinical trials were needed for further validation of the therapy.

In conclusion, the pulsed radiofrequency electromagnetic (PRFE) field seemed to have the potential as an adjunct therapy to accelerate and improve wound healing and reduce pain. However, the quality of the evidence was not satisfactory especially due to insufficient sample size and short study period.

Recommendations (if any)

Pulsed radiofrequency electromagnetic field may be used as an adjunct therapy for management of pain and wound under supervision.

Methods

Electronic databases were searched through Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1948 to present, and Embase 1996 to 2015 June 08. Searches were also run in PubMed, Horizon Scanning databases, FDA website and INAHTA for published reports. Search was limited to studies published within 1990s to 2000s. Google and Google Scholar were also used to search for additional web-based materials and information about the technology. Besides, additional articles from reviewing the references of retrieved articles also included.

Further research/reviews required

Pulsed radiofrequency electromagnetic field did showed benefit outcomes in adjunct with conventional pain and wound therapy. Thus further cost-effectiveness study can be more reliable.

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