Pulsed electromagnetic fields in treatment for osteoarthritis

A double-blind trial of the clinical effects of pulsed electromagnetic fields in treatment for osteoarthritis

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OBJECTIVE. Further evaluation of pulsed electromagnetic fields (PEMF), which have been observed to produce numerous biological effects, and have been used to treat delayed union fractures for over a decade. METHODS. In a pilot, double-blind randomized trial, 27 patients with osteoarthritis (OA), primarily of the knee, were treated with PEMF. Treatment consisted of 18 half-hour periods of exposure over about 1 month in a specially designed noncontact, air-coil device. Observations were made on 6 clinical variables at baseline, midpoint of therapy, end of treatment and one month later; 25 patients completed treatment. RESULTS. An average improvement of 23-61% occurred in the clinical variables observed with active treatment, while 2 to 18% improvement was observed in these variables in placebo treated control patients. No toxicity was observed. CONCLUSION. The decreased pain and improved functional performance of treated patients suggests that this configuration of PEMF has potential as an effective method of improving symptoms in patients with OA. This method warrants further clinical investigation.

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