ZUSAMMENSTELLUNG VON WISSENSCHAFTLICHEN PUBLIKATIONEN ZUR WIRKUNG VON PULSIERENDER MAGNETFELDTHERAPIE BEI LOCKERUNG VON PROTHESEN

1993

Use of pulsed electromagnetic fields in treatment of loosened cemented hip prostheses - a double-blind trial

Abstract

A double-blind trial of pulsed electromagnetic fields (PEMFs) for loosened cemented hip prostheses was conducted at two centres. Of the 40 patients who enrolled, 37 met entry criteria and were available for analysis. All patients completed six months of treatment (either active or control units). Success was determined clinically by a Harris hip score greater than or equal to 80 points (or an increase of ten points if initially greater than or equal to 70 points). Ten of the 19 active units were successes (53%), whereas two of the 18 controls (11%) exhibited a placebo effect, a statistically significant and clinically relevant result. A 60% relapse rate among the active successes was seen at 14 months poststimulation, and despite maintenance therapy of one hour per day, the relapse rate increased to 90% at three years. These data suggest that for loosened cemented hip prostheses, use of PEMFs is a treatment option only to delay revision hip surgery.

1996

Therapy with pulsed electromagnetic fields in aseptic loosening of total hip protheses: a prospective study

Abstract

Aseptic loosening is the most common problem of hip arthroplasties, limiting its long term success. We report a study of pulsed electromagnetic field (PEMF) treatment in 24 patients with this complication. At the end of treatment, six months and one year later, pain and hip movements improved significantly with the exception of flexion and extension. There was significant improvement in both isotope scans and ultrasonography, but not in plain X-ray. The decreased pain and improved function suggest that PEMF is effective in improving symptoms of patients with loose hip replacement. No improvement, however, can be expected in patients with severe pain due to gross loosening.

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