

ABSTRACT

Low Powered Laser Therapy for Rheumatoid Arthritis

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There are very few prospective controlled randomized trials of physiotherapy methods of treatment in arthritis. When new modalities of physical therapy become available it is especially important they are evaluated in this way. Low powered laser treatment is a novel form of local treatment that can be used in rheumatoid arthritis (RA). Placebo therapy can be given with specially adapted equipment. We used such an approach to examine the efficacy of laser therapy for RA knee joints using a double blind trial design.

A multi-head laser was used with optical light for direction finding and laser light (at 820nm) for therapy. Two leads were used for the study (coded A and B) but apparently identical to the operator, one was fully operational; the other gave optical light only. We studied 40 RA patients randomized to receive active or placebo low powered laser treatment. Where possible both knees were treated. Patients were assessed initially, at 3 and 6 weeks of therapy, and after treatment had been completed. Six variables were measured: flexion, extension, strength, stiffness, pain and overall grading of knee arthritis. Active therapy led to significant improvements in strength ($p=0.003$, unpaired t-test) and decreased pain ($p=.058$) compared to placebo treatment. Active treatment also led to fewer persistently flexed knees (22%) compared to controls (62%) and a greater number of normally graded knees (97.5%) compared to controls (73%); but were significant by Chi-squared testing ($p<0.025$ and <0.005 respectively).

This study shows randomized controlled studies of physiotherapy are possible; using such an approach low powered laser therapy appears an effective treatment for RA knees.