

The Effects of Repeated Thermal Therapy for Patients with Chronic Pain

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Key Words

- Chronic pain
- Multidisciplinary treatment
- Thermal therapy
- Far-infrared ray dry sauna
- Pain behavior
- Pain-related anger

Abstract

Background: It has been reported that local thermal therapy with a hot pack or paraffin relieves pain. We hypothesized that systemic warming may decrease pain and improve the outcomes in patients with chronic pain. The purpose of this study was to clarify the effects of systemic thermal therapy in patients with chronic pain. **Methods:** Group A (n = 24) patients with chronic pain were treated by a multidisciplinary treatment including cognitive behavioral therapy, rehabilitation, and exercise therapy, whereas group B (n = 22) patients were treated by a combination of multidisciplinary treatment and repeated thermal therapy. A far-infrared ray dry sauna therapy and post-sauna warming were performed once a day for 4 weeks during hospitalization. We investigated the improvements in subjective symptoms, the number of pain behavior after treatment and outcomes 2 years after discharge. **Results:** The visual analog pain score, number of pain behavior, self-rating depression scale, and anger score significantly decreased after treatment in both groups. After treatment, the number of pain behavior was slightly smaller (p = 0.07) and anger score was significantly lower in group B than those in group A (p = 0.05). Two years after treatment, 17 patients (77%) in group B returned to work compared with 12 patients (50%) in group A (p < 0.05). **Conclusion:** These results suggest that a combination of multidisciplinary treatment and repeated thermal therapy may be a promising method for treatment of chronic pain.

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