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# Phantom limb pain treated by far infrared ray

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## Abstract

We have treated a patient with severe phantom limb pain by a novel far infrared ray (FIR) therapy. The patient has suffered persistent and progressively worsening phantom limb pain after amputation ten years ago. He also experienced severe muscle spasm and twitch of stump during the attacks. His phantom limb pain was excruciating and was rated up to 9 by the Visual Analog Pain Scale. Various pain treatment modalities have been used but in vain, including medications and rehabilitation. He also underwent two episodes of sympathectomy, only achieving short-term effects for three months. Then he underwent our new treatment method. We applied FIR to the amputated limb site instead of the stump of the patient for 40 minutes for each treatment session twice a week. One month after the FIR treatment, he felt much improved and rated his phantom pain at 4, and down to 2-3 after two months of treatment. The duration of each phantom limb pain attack has significantly reduced from over 24 hours to only a few minutes or seconds after five months of FIR treatment. During a six-month post-treatment follow-up, his phantom limb pain occurred seldom for only a few seconds at a low 1-2 rating on the pain scale. The analgesic effect of FIR treatment has prevented him from the scheduled third sympathectomy and the risk of heart attack followed by severe twitch of stump. The results of this study demonstrate an easy, non-invasive and effective treatment modality for phantom limb pain.

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