Effects of electromyography biofeedback-assisted relaxation on pain in patients with advanced cancer in a palliative unit.

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Abstract

Most patients with advanced cancer experience pain. However, many cancer patients do not find satisfaction with conventional treatment of pain relief. This study examined the effect of electromyography (EMG) biofeedback-assisted relaxation on cancer-related pain in advanced cancer patients. We hypothesized that changes in EMG activity in frontal muscles underlie the efficacy of EMG biofeedback-assisted relaxation. This was a randomized control study. The experimental group (n = 12) received 6 EMG biofeedback-assisted relaxation sessions over a 4-week period, whereas the control group (n = 12) received conventional care. The primary efficacy measure was the level of pain, measured by the Brief Pain Inventory. Findings from this study show that relaxation training supplemented with visual and auditory EMG biofeedback signals is effective in reducing cancer-related pain in advanced cancer patients, possibly through a mechanism of attenuation of physiological arousal. Electromyography biofeedback-assisted relaxation training may be used along with medications for effective pain management in patients with advanced cancer.