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The effect of electrical stimulation therapy on dysphagia following treatment for head and neck cancer

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ABSTRACT

The purpose of this study was to evaluate the effect of neuromuscular electrical stimulation (NMES) in patients suffering from dysphagia following treatment for head and neck cancer. In a prospective, double blinded, randomized case control study between January 2006 and December 2007, 14 patients were randomized to 30min of NMES and 30min of traditional swallowing training for 5 days per week for 2 weeks (experimental group), and 12 patients were randomized to sham stimulation plus traditional swallowing training (control group). Effects were assessed using the clinical dysphagia scale (CDS), the functional dysphagia scale (FDS), the American speech-language-hearing association national outcome measurement system (ASHA NOMS) and the M.D. Anderson dysphagia inventory (MADI). Pretreatment evaluation showed no significant differences between the two groups for all parameters. Average changes of FDS score were 11.4 ± 8.1 for the experimental group and 3.3 ± 14.0 for the control group ($P=0.039$). CDS, ASHA NOMS and MADI showed some difference with treatment, but the changes were not significant ($P>0.05$). NMES combined with traditional swallowing training is superior to traditional swallowing training alone in patients suffering from dysphagia following treatment for head and neck cancer.