

Electric Stimulation for Dysphagia Following Stroke: Pilot Data.

Chaudhuri G, Brady S, Caldwell R, Arch Phys Med Rehab. 2006;87(11):e51

Abstract

Objective: To compare the effectiveness of electric stimulation with traditional dysphagia treatment following an acute stroke.

Study Design: Prospective, randomized clinical trial.

Setting: Free-standing rehabilitation hospital. Participants: Acute stroke patients (<6wk) with dysphagia divided into 2 groups: group 1 (electric stimulation): n=6; 5 men, 1 woman; mean age \pm SD, 61 \pm 10.7y; mean days post stroke, 23d; and mean number of treatment sessions, 8.33; and group 2 (traditional dysphagia treatment): n=5; 3 men, 2 women; mean age, 77.2 \pm 6.4y; mean days post stroke, 19.8d; and mean number of treatment sessions, 10.

Intervention: Electric stimulation. Main Outcome Measure: The American Speech Language Hearing Association (ASHA) National Outcome Measurement System (NOMS) swallowing level was assigned to each patient based on diet and supervision level as determined by pre- and post-treatment video fluoroscopic swallow studies. The ASHA NOMS is a 7-point swallowing scale (range, 1 [nil per os] to 7 [regular diet]).

Results: Initial AHSA NOMS swallowing level for group 1 was 2.17 and for group 2 was 2.6. Post-treatment ASHA NOMS swallowing level for group 1 was 3.8 and for group 2 was 2.6. Progress made for swallowing level for group 1 was statistically significant (P=.044) but not for group 2 (P=.16). A patient in the traditional dysphagia treatment group was emergency discharged to the acute care for fever and urinary tract infection. There were no emergency discharges for the electric stimulation group. Headache and neck and jaw pain were the most commonly reported side effects following electric stimulation, however, they were reported as mild.

Conclusions: The use of electric stimulation for dysphagia is a novel treatment approach. Initial pilot data from this prospective randomized study show support for the use of electric stimulation as a treatment modality for dysphagia following an acute stroke for patients undergoing rehabilitation.