Oral Rehabilitation - 2023 – Benfield Abstract

Swallow Strength And Skill Training With sEMG Biofeedback In Stroke Patients' Dysphagia

Objective
The study examined the efficacy of **surface electromyography** (**sEMG**) **biofeedback** in swallow strength and skill training in addressing and improving dysphagia in acute stroke patients.

Results
Swallow strength and skill training with **sEMG biofeedback** appeared feasible and acceptable to acute stroke patients with dysphagia. Preliminary data suggested it is safe and further research refining the intervention and investigating treatment dose and efficacy is warranted.

Participants and Researchers
Twenty-seven patients (13 biofeedback, 14 control) with the average age of 73.3 were recruited for the study.

The researchers were all from the Stroke Trials Unit, Mental Health & Clinical Neuroscience, University of Nottingham, Nottingham, England. They were *Jacqueline K. Benfield*, *Amanda Hedstrom*, *Lisa F. Everton*, *Philip M. Bath* and *Timothy J. England*.

Methods
Participants were randomized to either usual care or usual care plus swallow strength and skill training with **sEMG biofeedback**. Primary outcomes were feasibility and acceptability. Secondary measures included swallowing and clinical outcomes, safety and swallow physiology.

In addition to usual care, the treatment group received up to ten sessions of 1:1 therapy over a two-week period. Sessions lasted up to 45 minutes as tolerated. Therapy was given at bedside or in a therapy room on the stroke ward. For the **sEMG biofeedback** the **NeuroTrac Simplex** device (Verity Medical) was used in the study.

The full abstract can be found at https://onlinelibrary.wiley.com/doi/10.1111/joor.13437#:~:text=The%20objective%20of%20this%20prospective%2C%20randomized%2C%20controlled%20feasibility,acceptable%20and%20safe%20in%20the%20acute%20stroke%20setting.