Abstract

The effect of intensified, nonverbal facilitation of swallowing on dysphagia after severe Acquired Brain Injury (ABI): a pilot study

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Objective: To investigate the effect of intensified, nonverbal facilitation of swallowing on swallowing function in patients with dysphagia in the subacute stage after severe ABI.

Design: Pilot study

Setting: Subacute highly specialized neurorehabilitation Department.

Subjects: Ten patients after severe ABI (≤65 years) with dysphagia and pumping jaw movements before swallowing were randomly assigned to control group (n=5) and intervention group (n= 5).

Interventions: The intervention group received an intensification of the nonverbal facilitation of swallowing whilst the control group received basic care of the face and mouth for two sessions of 20 minutes per day for three weeks. All groups received Facial-Oral Tract Therapy ® (F.O.T.T.) as part of their treatment as usual

Measures: Functional Oral Intake Scale (FOIS) and Penetration Aspiration Scale (PAS), swallowing specific parameters, measured with Bio-impedance Electromyography Measurement (EMBI) (Schultheiss et al 2013).

Results: There were no significant differences for the FOIS- and PAS scores between groups from baseline to the final intervention. There was a significant improvement in the PAS score in the intervention group. The swallowing frequency increased during the treatment phase in the intervention group. Between groups, there was no difference in the frequency of pumping jaw movements and laryngeal elevation. Speed of laryngeal elevation was significantly reduced in the
post treatment phase for the intervention group and reduced significantly during treatment in the control group.

**Conclusions:** Sensorimotor input in terms of intensified nonverbal facilitation of swallowing decreases the risk of aspiration within the intervention group and increases swallowing frequency during treatment, compared with basic care of the face and mouth. There is a significant improvement of PAS within the intervention group. The lack of significance between groups is possibly due to the very small sample size. The use of EMBI allows a new insight into swallowing function without X-ray.

A larger study is required to determine the effect of nonverbal facilitation of swallowing on dysphagia after ABI.

**Reference**


**Key Words:** Deglutition disorders, dysphagia, Acquired brain injury, Facial Oral Tract Therapy (F.O.T.T.®), Neurorehabilitation, Facilitation of swallowing, Bioimpedance Electromyography Measurement (EMBI)

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