



**Service Priorities and Programmes**  
**Electronic Presentations**

**Convention ID:** 548

**Submitting author:** Ms Gwen WONG

**Post title:** Speech Therapist, RTSKH, HKEC

**Review of therapeutic outcome of Neuromuscular Electrical Stimulation (NMES) in treating patients with oro-pharyngeal dysphagia**

*Wong G (1), Pun E (2), Leung V (2), Choi F (2)*

*(1) Speech Therapy Department, Ruttonjee & Tang Shiu Kin Hospital*

*(2) Speech Therapy Department, Pamela Youde Nethersole Eastern Hospital*

**Keywords:**

Dysphagia

NMES

**Introduction**

NMES is a swallowing therapeutic method that uses electrical stimulation-place electrodes on suprahyoid musculature to elicit muscle contraction for a sustained period of time to increase strength and improve laryngeal elevation. Patient performs repetitive indirect exercise during the electrical stimulation to improve cortical re-organization and neuro-vascular coupling and therefore improve swallowing function.

**Objectives**

To investigate the outcome of NMES on patient with oro-pharyngeal dysphagia

**Methodology**

Patients having oro-pharyngeal dysphagia diagnosed upon bedside assessment either non-orally fed or orally fed from Nov., 2015 to April, 2017 in PYN, RH and TWEH with no contradiction in using NMES as the treatment modality were recruited. Bedside review was provided to patients after a course of NMES conducted. VFSS was implemented if the patients passed the bedside examination. NMES might be continued if patient failed in the bedside or instrumental examination. Treatment was terminated when patients were discharged from hospital setting or had limited progress noted.

**Result**

- 10 out of 18 (55.5%) of acute CVA, 1 out of 4 (25%) of non-acute CVA and 4 out of 10 (40%) of post RT H&N cancer cases showed improvement with NMES training.
- The mode of feeding of 8 out of 18 (44.5%) of acute CVA, 3 out of 4 (75%) of non-acute CVA and 3 out of 10 (30%) H&N cancer cases remained unchanged (non-oral).
- 3 out of 10 (30%) of H&N cancer cases showed deterioration after completion of NMES training.
- Though spontaneous recovery could not be excluded, over half of acute CVA patients showed improvement in swallowing function with NMES training.
- With similar percentage of H&N cancer cases showed improved and deteriorated

swallowing function and known deterioration as the natural course of post RT effects of H&N cancer patients, the effect of NMES is still uncertain.

- Relatively smaller percentage of non-acute CVA cases showed improvement. NMES could be a treatment option for clinician to consider, yet results have to be interpreted with caution as only few subjects included in this group.