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Dysphagia Management: the importance of NMES and traditional approach

BONGHI L., DE BONIS E., RITROVATO M.A. | FONDAZIONE CENTRI DI RIABILITAZIONE PADRE PIO ONLUS

INTRODUCTION

55 year old woman, in June 2014 surgery to remove a right cerebellopontine angle meningioma with secondary damages to peripheral facial, auditory nerve, right hypoglossal which caused dysphagia to solids and liquids and feeding through PEG, hoarseness, diplopia and impaired balance.

OBJECTIVES

- Recovery of sensation, mobility and strength of the bucco-lingual-facial and pharyngeal-laryngeal structures;
- Recovery of the swallowing function; reduction of feeding time via PEG and progressive restoration of the normal autonomous supply per os.

METHODS

- The classic speech therapy approach has been integrated with NMES stimulator for 10 weeks, 6 days a week, 30 minutes, 2 times a day in order to increase the quality of contraction, swallowing muscle strength and larynx elevation. NMES bypasses damaged central circuits by activating the neural tissue and contracting the deficient muscles.
- The patient assessed by:
 - FEES: Moderate phenomena of penetration / aspiration of the liquid and dense bolus. With Doss O'Neill Protocol: Level 1, severe dysphagia.
 - With AAO-HNS facial nervs House Brackman scale: GradeVI.
- The muscles involved by the NMES protocol are:
 - Muscles of Facial Expression
 - Palatal Muscles
 - Pharyngeal Muscles
 - Suprahyoid muscles
- On discharge the patient continued at home for two months NMES treatment.

House Brackman Scale		
I	Normal	Normal facial function
II	Mild	Slight synkinesis/weakness
III	Moderate	Complete eye closure, noticeable synkinesis, slight forehead movement
IV	Moderately Severe	Incomplete eye closure, symmetry at rest, no forehead movement, dysfiguring synkinesis
V	Severe	Assymetry at rest, barely noticeable motion
VI	Total	No movement

Dysphagia Outcome Severity Scale (DOSS)	Diet
Level 7: Normal	Normal diet Oral feeding (PO)
Level 6: Functional limits	
Level 5: Mild	Modified diet Oral feeding (PO)
Level 4: Mild-moderate	
Level 3: Moderate	
Level 2: Moderate-severe	Non Oral feeding (NPO)
Level 1: Severe	

RESULTS

- At the end of the 8th week, protocol Doss-O'Neill: level 6, severe dysphagia (level 7 after home treatment)
- AAO-HNS facial nervs House Brackman scale: Grade V (IV after home treatment)
- In October 2014 PEG was removed by restoring self feeding via os.

CONCLUSIONS

Integration between classic approach and NMES has shown effectiveness and efficiency for the rehabilitation of peripheral paralysis of the facial nerve and swallowing .Therefore, it deserves further study.

