Management of dysphagia in MS

Marta Renom
Speech and Language Therapist

CEM-CAT (UNeR)
Barcelona
Management of dysphagia in MS

INTRODUCTION

Normal swallowing

Dual function: transporting / protecting airway

- oral phase
- pharyngeal phase
- oesophageal phase

brainstem

cerebellar

cognitive

Dysphagia in MS: 33 to 43% (Calcagno 2002)
Management of dysphagia in MS

INTRODUCTION

Classification

According to:

1. Consistency affected
   - Liquids
     - EDSS ≤ 7.5
   - Solids
     - EDSS ≥ 8

2. Severity
Management of dysphagia in MS

INTRODUCTION

Classification

According to:

1. Consistency affected
2. Severity

- Safety
  - Penetration
  - Aspiration

- Efficacy
  - Nutrition
  - Hydration

Severity:
- Mild
- Moderate
- Severe
Consequences of dysphagia

↑ Morbidity / mortality
↓ Nutrition / hydratation
↓ Quality of life
↓ Independence
↓ Level of participation
Management of dysphagia in MS

ASSESSMENT AND TREATMENT

History taking & screening

Comprehensive clinical assessment

Instrumental assessment

Rehabilitation

Pharmacological treatment

Enteral feeding
Management of dysphagia in MS

ASSESSMENT

Clinical observations

- Voice
- Cough
- Laryngeal elevation
- Posture
- Secretions
- Palatal gag

Linden 2005 The probability of correctly predicting subglottic penetration from clinical observations (n=249) (success to predict 2/3)
Main signs and symptoms

- Altered *feeding habit*
- Cough and/or *choking* while or after eating and drinking
Other signs and symptoms

Food **sticking** in throat

Need to **repeat** the swallowing act

**Dyspnoea** during or after meals

**Weight** loss

Recurrent episodes of **infections** of the upper airways

Episodes of either unexplained **fever** or **pneumonia**

**DYMUS Questionnaire**

Management of dysphagia in MS

ASSESSMENT

Oral anatomy
Sensory-motor assessment
Muscular tone
Oropharyngeal reflexes
Movement execution
Functional assessment
Cognitive evaluation
Nutritional evaluation
Impact in daily life

V-VST
Clavé et al. 2008

MNA®
Guigoz 2006

SWAL-QOL / SWAL-CARE
McHorney CA, et al. 2002
Management of dysphagia in MS

ASSESSMENT

Instrumental assessment

Videofluoroscopy
Fiberoptic endoscopic laryngoscopy
Electromyography
Manofluoroscopy

Dysphagia outcome and severity scale
O’Neil KH, Purdy M, Janice F. Dysphagia 1999

Eight-point-penetration-aspiration-scale:
Rosenbeck JC, Robins JA, Roecker EB et al. Dysphagia 1996
<table>
<thead>
<tr>
<th>Disturbance</th>
<th>Restitution</th>
<th>Compensation</th>
<th>Adaptation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced lingual control</td>
<td>Tongue exercises</td>
<td>Head anteflexion</td>
<td>Thickening of liquids</td>
</tr>
<tr>
<td>Impaired tongue base retraction</td>
<td>Tongue exercises</td>
<td>Head anteflexion</td>
<td>Smooth consistency</td>
</tr>
<tr>
<td></td>
<td>Masako manoeuvre</td>
<td>Mendelsohn manoeuvre</td>
<td></td>
</tr>
<tr>
<td>Delayed / absent swallowing reflex</td>
<td>Stimulation of the faucial pilars</td>
<td>Supraglottic swallowing</td>
<td>Enhancing taste/temperature</td>
</tr>
<tr>
<td></td>
<td>Tongue exercises</td>
<td>Head anteflexion</td>
<td></td>
</tr>
<tr>
<td>Reduced laryngeal closure</td>
<td>Positional, compression and respiratory</td>
<td>Supraglottic swallowing</td>
<td>Thickening of liquids</td>
</tr>
<tr>
<td></td>
<td>support strategies</td>
<td>Turning the head to the stronger</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pitch / Phonatory exercises</td>
<td>side</td>
<td></td>
</tr>
<tr>
<td>Dysfunction of the upper oesophageal sphincter</td>
<td>Ex: maximizing extent and timing of</td>
<td>Mendelsohn manoeuvre</td>
<td>Thin consistency</td>
</tr>
<tr>
<td></td>
<td>hyoid/laryngeal elevation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shaker manoeuvre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduced pharyngeal contraction</td>
<td>Whistling, sucking, snarling</td>
<td>Turning head to affected side</td>
<td>Smooth consistency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tilting head to stronger side</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Effortful swallowing</td>
<td></td>
</tr>
<tr>
<td>Diminished pharyngeal and/or laryngeal</td>
<td>No evidence-based restitution method</td>
<td>Supraglottic swallowing</td>
<td>Enhancing taste/temperature</td>
</tr>
<tr>
<td>sensation</td>
<td></td>
<td>(if silent aspirations)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Repeated swallowing</td>
<td></td>
</tr>
</tbody>
</table>

Neuromuscular electrostimulation


Submental sensitive transcutaneous electrical stimulation (SSTES) at home in neurogenic oropharyngeal dysphagia: a pilot study

Domenico A. Restivo, Antonino Casabona, Diego Centonze et al.

Pharyngeal electrical stimulation for dysphagia associated with multiple sclerosis: A pilot study
Brain Stimulation xxx (2012) 1-6

Intraluminal electrical pharyngeal stimulation
Pharmacological treatment

D. A. Restivo, R. Marchese-Ragona, F. Patti, et al.:

Botulinum toxin improves dysphagia associated with multiple sclerosis

European Journal of Neurology 2011, 18: 486–490

Potential benefit from botulinum neurotoxin type A treatment in MS patients with dysphagia associated with upper esophageal sphincter hyperactivity
REFERENCES


