

Report meeting SIG Communication & Swallowing

Date: May 4, 16.00-19.00

Place: RIMS Conference 2017, Barcelona, Spain

Participants: Astero Constantinou (CY), Anna Cremasco (IT), Itziar García (ES), Leena Maria Heikkola (FI), Kelly van Landeghem (BE), Sofie Noë (BE), Marta Renom (ES) & Leonie Ruhaak (NL)

Agenda

Discussion of dysarthria in MS – the meeting consisted of discussing existing literature on dysarthria and MS (see articles discussed below) and on a more practical level, discussing current practices of evaluation and treatment of dysarthria reported by RIMS SIG members present at the meeting.

Articles discussed:

- Hartelius, Runmarker & Andersen (2000). Prevalence and Characteristics of Dysarthria in a Multiple-Sclerosis Incidence Cohort: Relation to Neurological Data. *Folia Phoniatrica et Logopaedica*, 52; 160-177.
- Hartelius, Runmarker, Andersen & Nord (2000). Temporal Speech Characteristics of Individuals with Multiple Sclerosis and Ataxic Dysarthria: 'Scanning Speech' Revisited. *Folia Phoniatrica et Logopaedica*, 52; 228-238.
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Summary of discussion (characteristics and nature of dysarthria)

- Most MS patients with a dysarthria have a combination of ataxic and spastic dysarthria. Characteristics of dysarthria in MS can be described by the following: respiration, phonation, articulation, nasality and prosody (speech rate, stress, intonation). The most commonly found characteristics are imprecise consonant articulation, vocal harshness and impaired prosody. The first characteristic is most influential in contributing to overall impressions of severity of speech deviation as well as decreased intelligibility. Severity of speech deviation was positively correlated to overall severity of neurological involvement (EDSS + RFSS).
- Temporal dysregulation is a primary characteristic of ataxic dysarthria, seen in MS; a) **interutterance**, PwMS have higher variability in syllable duration than healthy controls and b) **intrautterance**, PwMS have lower variability in syllable duration than healthy controls. This indicates inflexibility and instability of temporal control.
- Prevalence of dysarthria and prevalence of dysphagia appear to be similar.

Further comments made by meeting participants:

- How can we make test situations more naturally?
 - o Use of background noise during testing or analyse connected speech which is different from analysing single words of phrases
- Summary of what items could be used for the diagnosis:
 - o Asses dysarthria with an assessment that focuses on the named characteristics (for example NDO-V)
 - o Acoustic analysis (PRAAT)
 - o Social aspects (Speech Handicap Index)

- Recommendations for further reading:
 - Murdoch (Ed.). (1998). *Dysarthria: A Physiological Approach to Assessment and Treatment*. Stanley Thornes (Publishers) Ltd
 - European Multiple Sclerosis Platform (EMSP). Dysfunction of Speech and Communication. *Recommendations on Rehabilitation Services for Person with Multiple Sclerosis in Europe*, 43-44.

Discussion on current clinical practice for diagnosis and treatment in various centers:

- Revalidatie & MS Centrum, Overpelt:
 - Diagnostics: NDO-V (standardized and valid assessment with focus on the five characteristics, but still subjective), Speech Handicap Index, Dutch Sentence Intelligibility Assessment (NSVO)
 - Therapy: individual and in group sessions
- CEMCAT, Barcelona:
 - Diagnostics: a short own developed assessment
 - Therapy: in groups (combination of cognitive communication problems and dysarthria), health education, telerehabilitation exercises, choir
- ADEMBI, Bilbao:
 - Diagnostics: own developed assessment on respiration, cranial nerves, articulation and orofacial
 - Therapy: individual sessions (a long time in therapy to generalize), groups for respiration
- National MS Centrum, Melsbroek:
 - Diagnostics: own assessment with focus on respiration, phonation, articulation, nasality and prosody, the Dutch Sentence Intelligibility Assessment (NSVO)
 - Therapy: in groups for respiration (using RMST, respiratory muscle strength training), dysarthria always combined with cognitive exercises
- Nieuw Unicum, Zandvoort:
 - Diagnostics: NDO-V, Visual Analog Scale (for measuring experienced burden)
 - Therapy: starts individually, focused on the characteristics that influence the intelligibility the most. Group therapy for generalization. Another option is arranging and learning to cope with a communication device.
- AISM, Padova:
 - Diagnostics: dysarthria profile
 - Therapy: individual therapy and group therapy with focus on coordination and respiration

Participants discussed research projects and opportunities for collaboration:

- Current projects:
 - Leena Maria: has been working on a project analysing semi-spontaneous speech (frog stories). She will have a presentation on this topic tomorrow.
 - Marta: DYMUS project within our SIG with a RIMS grant; questionnaire for dysphagia is translated to Spanish and Dutch. We validate the DYMUS questionnaire by clinical assessment (V-VST). This project is almost finished.
 - Astero:
 - Presentation at RIMS/ Cemcat training pre-session on dysphagia and MS. Currently running an epidemiological longitudinal (5-year follow up) study of the natural history of dysphagia in people with MS.

- Requesting collaboration from centers that have instrumental diagnostic capabilities (VFSS or FEES) to validate a CART MS dysphagia risk factor as a screening tool – any centers interested please contact her.
- Oral presentation of an abstract accepted on Risk Factors of Dysphagia in MS. She will have a presentation on this topic tomorrow.
- Leonie:
 - submission for RIMS grant for systematic review on dysarthria in MS with Fredrik, Francesca and Leonie as reviewers. Other SIG-members will also be asked to contribute. With this overview we will be able to develop therapy guidelines for dysarthria in MS.
 - Project on spontaneous speech to be analysed with still to be selected parameters. We find it important to look at language as we use it in daily life instead of tests.

Future SIG project ideas:

- Telerehabilitation in different languages on different topics (related to communication and swallowing). We agree to have a look at the Spanish videos. If you want to participate in the project, you can send an e-mail to Leonie (lruhaak@nieuwunicum.nl). She will not coordinate this project.
- Increasing awareness on communication problems and swallowing
 - More presentations/involvement in next conference. If you have ideas for a guest speaker, or you want to speak yourself, please tell Leonie.

Next in-between SIG-meeting:

- will probably be at Overpelt, Belgium. Kelly and Leonie will have contact and inform everyone as soon as we know more.
- Focus on:
 - Telerehabilitation
 - Apps
 - Systematic review in dysarthria
 - Case study?
 - Your input!!