Two Cases of Re-emergent Stuttering in Parkinson's Disease

Ryan A. Millager*, Laura Z. Ferriero*, Alina Carter*, & Ellen M. Kelly†

*Massachusetts General Hospital †Vanderbilt University

STUTTERING IN PD

Stuttering + Parkinson's

Hypokinetic dysarthria can resemble childhood stuttering—how to differentiate?

Common in PD:

- *Palilalia/echolalia* – compulsive repetition of utterances, tends to include entire words/phrases
- Repeated phonemes – often with a "tremulous character" (Duffy, 2005)

Childhood/developmental stuttering:

- Marked by sound/syllable repetitions, prolongations, blocks, tend to occur at beginning of utterances
- Many physical concomitants possible which can occur as a response (rather than accompany) stuttering
- Potentially aggravated by treatments for PD
  --Dopaminergic treatment (Anderson et al., 1999)
  --Deep brain stimulation (Toft & Dietrichs, 2011)

TREATMENT CONSIDERATIONS

Counseling & patient education

- Solution-Focused Brief Therapy (Burns, 2005)
- Counseling regarding progressive neurologic disease

Behavioral speech therapy

- Stuttering identification & modification (Conture, 2001)

Lee Silverman Voice Treatment (LSVT®)

- Intensive, evidence-based program for hypokinetic dysarthria with focus on diaphragmatic breathing (Duffy, 2005; Trail et al., 2005)

CASE HISTORIES

Client A (*Vanderbilt*)	Client B (*MGH*)
73-year-old male	63-year-old male
Stuttering re-emerged ~5 years post PD diagnosis	Stuttering re-emerged ~1.5 years post PD diagnosis
Seen for 29 one-hour sessions (over 16 months)	Seen for 7 one-hour sessions (over 2 weeks)
Clinical observations: Blocks and tense prolongations with facial concomitants at the beginning of utterances; reduced loudness, especially trailing off at ends of utterances.	Clinical observations: Blocks and tense prolongations with sound and whole-word repetitions; reduced eye contact; facial grimaces; reduced loudness; monopitch, monoloud speech characteristics.

TWO TREATMENT APPROACHES

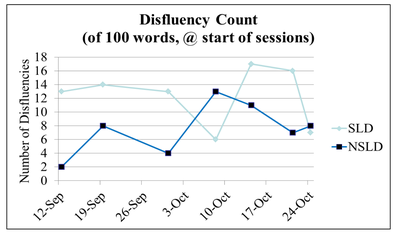
Client A:

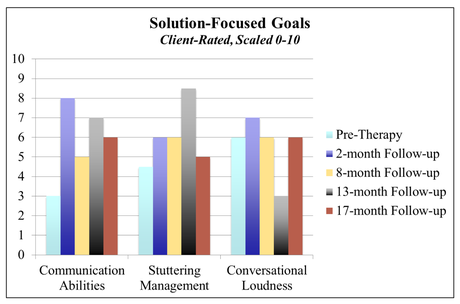
Client A was initially offered LSVT® to address hypokinetic dysarthria. He was not agreeable to this approach, with concerns that increased loudness and emphasis on speech articulation might exacerbate his stuttering.

He was then directed to a fluency specialist, with 1x weekly treatment in an initial course focusing on **patient-counseling** (solution-focused brief therapy) **and review of stuttering modification strategies**. Follow-up "refresher" sessions given at irregular intervals per client request.

Client's self-identified targets: increase in overall management of stuttering, increased satisfaction with communication abilities, precise articulation, and longer pauses at phrase/sentence boundaries.

SELECTED OUTCOMES:





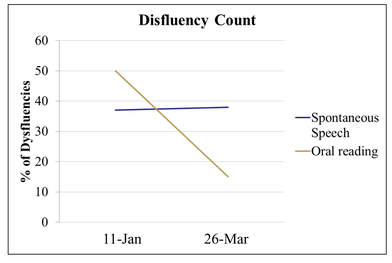
Client B:

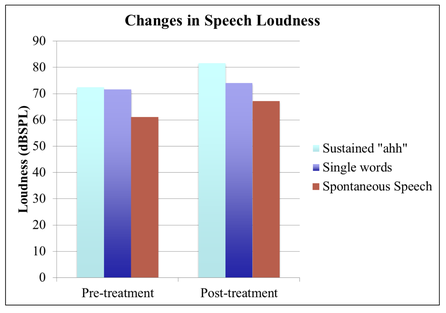
Client B had previously been seen by an outside SLP to address fluency concerns with prior focus on stuttering modification. Past medical history was significant for anxiety/depression.

He was seen at MGH for additional concerns re: hypokinetic dysarthria, although ongoing disfluencies remained the most concerning feature of his speech. Given limited time window for work with this patient, a 2-week intensive treatment (with 3-month follow-up) was devised.

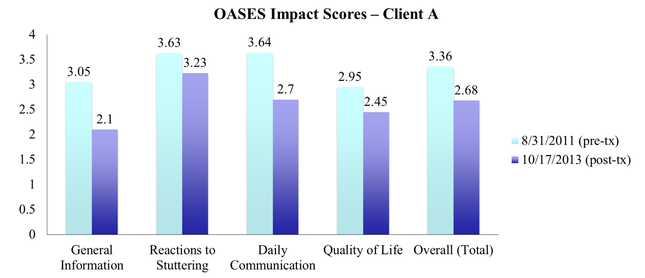
Treatment focused on **diaphragmatic breathing and increasing vocal loudness** (1-hour sessions, 4x per week). Trained hierarchical speech tasks including word-, phrase-, and sentence-level communication.

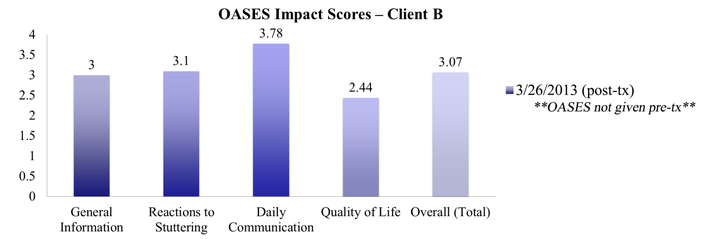
SELECTED OUTCOMES:





PATIENT-REPORTED OUTCOMES





CONCLUSIONS & DISCUSSION

- Broadly, **Client A** perceived improvements over a 17-month period for communication abilities and stuttering management, with significant variability in performance from week to week.
- **Client B** exhibited some improvements toward goals in speech loudness and fluency, although carryover to spontaneous speech was limited in this short-term intervention design.
- This case study contributes to reports of persons with re-emergent stuttering in PD (see Lim et al., 2005; Shahed & Jankovic, 2001).
- Loudness treatment did not appear to exacerbate stuttering in either case, although general body tension may have increased with diaphragm effort.
- Neither approach explicitly addressed psychological components of progressive/re-emergent processes, a potentially important consideration.
- Formal LSVT® treatment protocols were not attempted with either client—would these patients benefit from a more intensive treatment?

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