Huntington's Disease Society of America

SPEECH , SWALLOWING, AND COMMUNICATION IN HD

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Presenter Disclosures

Cheryl L. Giddens, Ph.D.

The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose
or list

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Huntington's Symptoms

- Cognitive changes
- Rigidity
- Chorea
- Balance Deficits
- Incoordination
- Tremor
- Cachexia – can exacerbate all above
- Feeding and thirst set point?

Hyperkinetic (HD) Dysarthria

Respiratory System (breathing): sudden forced exhalation & inhalation

Phonatory System (voice): excessive loudness and pitch variations; voice arrests (stoppages); strained, harsh vocal quality

Articulatory System (speech production): involuntary mouth opening; imprecise movements & tendency toward an increased speaking rate. Rate possibly secondary to rush to speak before involuntary movements occur

Velopharyngeal System (oral/nasal resonance): intermittent hypernasality

Same systems control swallow and impairment can result in dysphagia (disordered chewing and swallow)

Dysphagia of HD

- Respiratory system: failure of “breath hold” and involuntary forced inhalations (chorea) during swallow – risks for aspiration
- Phonatory system – choreaform movements of vocal folds results in failure of folds to remain closed during swallow; aspiration risk
  - Epiglottis is laryngeal cartilage which can fail to hold it’s position (chorea) covering airway during swallow and aspiration risk results

HD Dysphagia, continued

- Articulatory system – food spillage when mouth involuntarily opens; difficulty moving food from front of tongue to back of tongue for swallow; difficulty chewing secondary to involuntary jaw movements
- Velopharyngeal system – choreaform movements of soft palate can open the nasal cavity resulting in nasal regurgitation during swallow
- Excessive belching – swallowed air

History of ST and HD

- Speech/Swallow – Very dynamic functions and historically, speech/swallow therapy not thought efficacious for individuals with Huntington's Disease
- Historically, when therapy was initiated, it was compensatory (positioning, chin tuck, consistency control, etc. for swallow)
- My experiences since 2001 using strengthening therapy with more than 14 patients with HD appeared to be efficacious for many patients

Assessment

- Cranial nerve exam
- Informal or bedside swallow exam
- Assessment of respiratory function, including posture
- Assessment of laryngeal function for voice
- Judgment as to speech intelligibility (including speaking rate)
- Language/cognitive screen
- Cardiovascular screen
- Cognitive assessment

HD Dysarthria and Dysphagia Treatment

- Most effective management - pharmacological (reduce choreaform movements)
- Behavioral management – attempt to maintain speech and swallow function as long as possible
  - Early behavioral intervention can prevent maladaptive speaking and feeding behaviors
    - Maladaptive breathing patterns
    - Speaking too quickly in anticipation of choreaform movements
    - Avoidance of oral feeding for fear of choking

Treatment, continued

- Strengthening/coordination exercises for lips, tongue, jaw
- Strengthening/coordination exercises for respiratory mechanism; postural changes
- Strengthening/coordination exercises for vocal folds
- Traditional dysphagia management – thermal stimulation, taste alteration (sour bolus), positioning, consistency alterations, multiple swallows

Treatment, continued

- Memory impairment can be compensated by keeping a daily calendar with reminders of errands, chores, calls to make, etc.
- Memory/cognitive function may be maintained by continuing to read, write, converse – do not avoid social interaction, especially with loved ones
- Word-finding deficits can be treated with exercises – SLP, OT, Clin Psych can help you

Why is this important?

- Social status
- Emotional status
- Psychological status
- Physical status
- Caregiver status - emotional and psychological

Journaling (Diary)

- Daily – patient or caregiver
- Tracks changes due to medications versus behavioral interventions
- Include: vital capacity; hours sleep; diet; exercise practice; quality of speech, cognition/language; swallow (choking, coughing, fever, URI, gurgly voice); medications taken, timetable, and dosage
- Should accompany patient to every doctor/therapy appointment

Augmentative and Alternative (if necessary later)

- Reduce/eliminate environmental noise
- Give immediate feedback
- Attention during feeding
- PEG tube to supplement oral feeding
- Augmentative device – alphabet board; communication (picture) notebook

Practice Session

- Breathing
- Lip
- Tongue
- Voice
  - Pitch
  - Loudness
  - Cough on command
  - Glottal adduction
  - Prolonged vowel – quality, length, control

Current Work at OSU

- Salivary cortisol; salivary pH
- 5 days/week therapy – 68 year-old female
    - Skype
    - Conference call

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