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

Huntington’s Disease Society of America
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 – choreiform 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
Sources Cited


Sources Cited, continued