Swallow Therapy: The UCLA Algorithm

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Swallowing and Dysphagia: The Big Picture

• Swallowing can be broken down into two areas:

  • Airway Protection/Safety
    • Sensation plays a HUGE role in airway safety.

  • Swallow Efficiency
    • How quickly and thoroughly can you move food and liquid through your mouth and throat.
Oropharyngeal Dysphagia in the H&N Cancer Population

• Oropharyngeal cancers have been on the rise since 1973 (Chaturvedi, et. al., 2008).
  • HPV-attributed diseases accounting for about 70% of oropharyngeal cancers (Chaturvedi et. al., 2011).

• Post-treatment dysphagia has been reported in at least 50-60% of cases.
  • Occurs from a variety of factors.
Oropharyngeal Dysphagia in the H&N Cancer Population

• Patients often have difficulties with both swallow efficiency and lower airway protection as a result of their cancer treatment(s).
  • Likely experience reduced range of motion in area of surgery (and possibly adjacent areas).
  • Patients who have been treated with chemoradiation (CRT) or radiation (XRT) can have reduced range of motion in the area of radiation due to radiation fibrosis.
  • Sensory deficits are common.
Oropharyngeal Dysphagia in the H&N Cancer Population

• Quality of Life

  • Extra work/effort during meals.
    • Decreased pleasure for eating and drinking.
    • Weight loss.

  • Feeding tubes or obvious swallowing problems (e.g. coughing during meals).

  • Individuals may avoid meals with others or won’t participate in social gatherings.
Oropharyngeal Dysphagia in the H&N Cancer Population.

How do we manage this special population?
UCLA Swallow Preservation Program

• This program was developed for our patients currently undergoing treatment for H & N Cancer.

• GOALS:
  • Maintain swallow function and avoid a long-term dysphagia.
  • Act as a conduit between radiation oncologists, H&N surgeons, nutritionists, social work, etc.
  • Monitor swallow safety throughout treatment and to identify problems earlier.
  • Provide ongoing support, education and adherence to the program!
    • Keep swallowing because ….
UCLA Swallow Preservation Program

- Individuals who were compliant with the swallow preservation program during treatment had better outcomes than the noncompliant group (Duarte, et. al., 2013).
  - Lower G-tube dependence
  - Higher percentage of patients tolerating regular diet
  - Higher rate of maintaining or improving their diet

- Individuals who participated in a swallow preservation type program during XRT had a significant increase in dysphagia-related QOL. (Kulbersh, et. al., 2006).
UCLA Swallow Preservation Program

- Pre-XRT MBSS
  - Can guide treatment!
- Initial treatment session
- Weekly swallow therapy sessions during and 4 weeks post-XRT
- Post-XRT MBSS
  - Patients reporting dysphagia symptoms 3 months after last treatment.
    - To identify problems early on.
    - Additional treatment and/or appropriate referrals if necessary (i.e. H&N surgery, Maxillofacial, etc.).
UCLA Swallow Preservation Program

• **Swallow Exercises**
  
  • Each exercise is aimed at improving or preserving ROM/strength for oral and pharyngeal structures.
    
    • Effortful swallow
    • Mendelsohn Maneuver
    • Lingual Press/Lingual Protrusion
    • Shaker (or chin tuck against resistance)
    • Therabite/Orostretch
UCLA Swallow Preservation Program

- S-EMG
  - Biofeedback!
Post-XRT Dysphagia

• Post-XRT considerations:
  • Epiglottic dysfunction
    • Epiglottis may not deflect. Can act as a barrier during the swallow.
  • Esophageal stricture (proximal esophagus)
    • Development of an esophageal stricture can occur after XRT.
  • Poor pharyngeal contraction
    • Poor driving force- leads to pharyngeal residue.
Post-XRT Dysphagia

Specific post-XRT considerations:

- Reduced sensation
  - Absent cough reflex - SILENT aspiration.
  - Poor sensation of residue.
  - Dysgeusia.
  - Patients with reduced sensation are LESS likely to follow recommendations

- Xerostomia
Post-XRT Dysphagia

• The SLPs Role:
  • Appropriate referrals
  • Development of a patient specific treatment plan
    • Exercises to improve swallow function.
    • Postures to improve airway protection and/or swallow efficiency.
    • Training in swallowing strategies to eliminate or reduce aspiration risk.

• The patient’s treatment plan can be a combination of therapy and surgical intervention.
Case Study

• The patient is a 44-year-old male with a history of SCC of his right tonsil.
  • Completed CRT in November 2011.
  • Developed progressive dysphagia and osteoradionecrosis of the jaw/maxilla.
  • Multiple episodes of PNA.
  • Dysphagia symptoms:
    “Food sticks in my throat.”
    “I need to drink liquid when eating.”
    “I cough a lot when I drink.”
Case Study

• Initial MBSS: June 2015
  • Airway Safety issues
  • Inefficient swallow

• MBSS RECS
  • Course of swallow therapy
  • Referral to Dr. Chhetri
Case Study

• Surgery:
  • November 5, 2015
    • Epiglottoplasty
    • Esophageal dilation to 20mm
    • PEG also placed at this time

• Post-Surgery MBSS
  • November 17, 2015
    • Less pharyngeal residue
    • Continued poor airway protection
Case Study

• MBSS recommendations
  • Continue G-tube feeds.
  • Supplemental PO intake as desired.
  • Use the super supraglottic swallow followed by leaning over and hocking, for all swallows.
  • Swallow with head turned to the right.
  • Liquid is recommended over food. If the patient decides to swallow food, it should be performed with liquid assist with head turned right, followed by a sip of liquid.
  • Swallow therapy.
Case Study

**Swallow Therapy GOALS:**

1. Help the patient become proficient with swallowing in the manner described in recommendations
   - Specific training with super supraglottic swallow maneuver with HOCKING!

2. Exercises for tongue base retraction and hyolaryngeal elevation
   - Effortful swallow, Mendelsohn maneuver, Shaker

• After 10 therapy sessions the MBSS was repeated…
Case Study

• Post-Therapy MBSS
  • February 9, 2015
    • Improved Airway Protection
    • More Efficient Swallow
References


