Dysphagia and the Speech Pathologist’s Role

Sally Gorski, MA,CCC-SLP

Dysphagia

• What is it?
  • Difficulty moving food from mouth to stomach
  • All behavioral, sensory and preliminary motor acts in preparation of the swallow

• Occurs in all age groups, from newborns to the elderly

• Can occur as a result of:
  • Structural damage
  • Congenital abnormalities
  • Medical conditions

Dysphagia

• Can occur acutely – CVA

• Or worsen over time – Tumors of the pharynx or progressive neurologic disease

Stages of a Normal Swallow

• Oral Preparatory
• Oral
• Pharyngeal
• Esophageal

Structures of Swallowing

• Lips, hard/soft palate, maxilla, mandible
• Tongue, teeth and gums
• Pharynx
  • Nasopharynx
  • Oropharynx
  • Hypopharynx
• Esophagus
  • LES
  • LES
• Larynx
Example of a Normal Swallow
Modified Barium Swallow Study

Symptoms – Oral Dysphagia
• Drooling
• Pocketing food in the oral cavity
• Food sticking
• Facial droop

Symptoms – Pharyngeal Dysphagia
• Coughing/choking
• Wet/Hoarse/Breathy voice
• Weak cough
• Aspiration
• Food sticking; patient indicates area in neck

Symptoms – Esophageal Phase
• Food sticking – may have pain
• Regurgitation
• More difficulty with solids
• Reflux

Bedside Dysphagia Exam
• Oral mechanism exam
  • Facial muscles (CN VII)
  • Mandible (CN V)
  • Tongue (CN XII)
  • Velopharynx (CN X)
  • Laryngeal musculature (CN X)

Cranial Nerves - Swallowing
Cranial Nerves

- Trigeminal (V) – Motor control of the mandibular muscles and sensory functions in the jaw
- Facial (VII) – Motor function of facial expression and salivary glands
- Glossopharyngeal (IX) – Stylopharyngeus muscle, posterior taste buds and feeling in the soft palate

- Vagus (X) – Sensory responses of the larynx and pharynx
- Spinal Accessory (XI) – Motor function of the sternocleidomastoid muscle
- Hypoglossal (XII) – Motor function of the intrinsic tongue

Bedside Dysphagia Exam

- Oral anatomy
- Labial control to keep food in the mouth
- Lingual control for oral manipulation of the bolus
- Palatal function-prevent nasal regurgitation
- Pharyngeal control as it impacts food moving through the pharynx
- Laryngeal control impacting airway protection

Bedside Dysphagia Exam

- How does the voice sound: breathy, hoarse, wet, gargly, etc.
- Respiratory support for speaking
- Cough strength
- Hyponasal or hypernasal
- Inflection, intonation, affect
- Speech intelligibility
- Ability to sustain speaking, voicing, etc.

Bedside Dysphagia Exam

- Motor Speech Exam
  - Phonation/Respiration
    - Vowel prolongation, cough
  - Resonation
  - Articulation/Prosody
    - Alternate motion rate, sequential motion rate
  - Stress Test for Fatigability
  - Overall Speech Intelligibility

Bedside Dysphagia Exam

- PO Presentation
  - Proceed based on patient’s condition
    - Ice Chips
    - Sips of water
    - Thickened liquids
    - Pureed texture
    - Soft solid or a solid (cookie)
    - Food from their meal tray
Bedside Dysphagia Exam

- Palpate laryngeal elevation
- Assess airway protection
  - Listen to voice quality; say "ahhhhh"
  - Spontaneous cough
  - Wet voice quality after the swallow
- Patients who cough and choke hard in response to oral intake are usually safer than silent aspirators even though the former get more attention during mealtime.

Instrumental Exams

- Modified Barium Swallow Study
  - Still the “gold standard”
  - Travel to Radiology
  - Transfer to the radiology chair
  - Ingest barium products
  - Radiation exposure

Instrumental Exams

- Fiberoptic Endoscopic Evaluation of Swallowing – FEES or FEESST
  - Portable – can go to the bedside
  - Use familiar food, no barium
  - Directly visualize the larynx
  - No radiation exposure, study can last longer
  - Optimal with H&N Cancer patients

Example of Disordered Swallowing

Modified Barium Swallow Study

The Diet Recommendation

- Factors influencing diet recommendations:
  - Medical status
  - Cognitive status
  - Level of Alertness
  - Patient’s symptoms during attempts to swallow
  - Presence of a trach tube
  - Maintain nutrition/hydration via PO only

The Diet Recommendation

- Timely oral transit → laryngeal elevation across consistencies
- Chewing – ability to handle soft/hard solids
- Status of dentition
- How did the pt tolerate thin or thickened liquids?
- Then make a diet rec or recommend a MBSS or FEES.
**The Diet Recommendation**

**Discuss the diet options with the Dietitian.**
- Regular
- Soft
- Mechanical Soft
- Full Liquid
- 6 meals/day
- Patient’s food preferences

**Diet choices at HCMC**

- National Dysphagia Diet guidelines
  - Level 1 dysphagia (pureed)
    - Smooth, homogenous
  - Level 2 dysphagia (mechanically altered)
    - Ground meats/vegetables, soft; gravy/sauce
  - Level 3 dysphagia (advanced)
    - Soft meats; gravy/sauce

- Other diets used often:
  - Soft
    - Similar to Level 3 but includes bread
  - Mechanical soft
    - Similar to Level 2 but includes bread

**Barriers to adequate nutrition**

- Dislike of textures
- Limited food choices
- Difficulty drinking adequately with thick liquids
- Blood sugar changes with the use of thickeners
- Length of time for meals

**Based on Diagnosis**

- What is the Prognosis?
  - Strokes
  - TBI
  - Just extubated
  - Recurrent pneumonias
  - Head & neck cancer
  - Deconditioned
  - Geriatric

**Swallowing and Tracheostomy Tubes**

*The Speech Pathologist’s role*

**Example of Swallowing with trach tube present**

*Modified Barium Swallow Study*
**Swallowing and Trachs**

- PMV placement first if patient able to tolerate
- Consider swallow exam if patient is able to tolerate the PMV
  - Oral mech/motor speech exam
  - Suction patient, deflate cuff, place PMV
  - PO Evaluation – blue dye
  - Suction patient for evidence of blue dye in tracheal secretions
  - Continue to monitor for delayed aspiration

**PMV – cuffless trach**

**Swallowing and Trachs**

- Cuff does not prevent aspiration
- Even when cuff is deflated, can still be bulky in the airway
- Presence of a trach – reduced anterior rotation and elevation of the larynx
- Inflated cuff – compression on the esophageal wall
- Oral intake with the cuff down and the PMV in place is the ideal
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<thead>
<tr>
<th>Trach Changes/Downsizing</th>
<th>Swallowing Strategies</th>
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<tbody>
<tr>
<td>• Typical progression toward decannulation</td>
<td>• During oral intake:</td>
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<tr>
<td>• Weaned from the vent</td>
<td>• Small bites/small sips</td>
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<tr>
<td>• Tolerates the PMV</td>
<td>• Chin tuck</td>
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<tr>
<td>• Tolerates some PO for pleasure; TF for primary nutrition/hydration</td>
<td>• Alternate solids with liquids</td>
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<tr>
<td>• No other indications for return to the vent</td>
<td>• Supraglottic technique</td>
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<tr>
<td>• Downsize to a cuffless trach</td>
<td>• Swallow 2-3 times per bite/sip</td>
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<tr>
<td>• Plug trach; advance diet</td>
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<tr>
<td>• Decannulate</td>
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<th>Dysphagia Therapy</th>
<th>Teaching Interventions</th>
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<tr>
<td>• Indirect – using exercises to improve motor function</td>
<td>• Aspiration precautions</td>
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<tr>
<td>• Ex: Pharyngeal strengthening exercises</td>
<td>• Sit upright</td>
</tr>
<tr>
<td>• Direct – present food or liquid while working on specific strategies</td>
<td>• Small sips of liquids</td>
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<tr>
<td>• Ex: Teach the supraglottic technique or the Mendelsohn maneuver</td>
<td>• Small bites of solids</td>
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<td></td>
<td>• Chew carefully</td>
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<td>• Sit upright 30 min after the meal</td>
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<tr>
<th>Teaching Interventions</th>
<th>How can you collaborate with your speech pathologist?</th>
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<tbody>
<tr>
<td>• Swallowing Strategies per Speech Pathology</td>
<td>• Call them when you have a question</td>
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<tr>
<td>• Chin tuck for all sips of liquids</td>
<td>• Talk about your needs for the patient</td>
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<tr>
<td>• Swallow 2-3 times for each bite</td>
<td>• Discuss dysphagia diet parameters at your facility together</td>
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<tr>
<td>• Turn head to left or right</td>
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<tr>
<td>• Avoid extending head back when drinking</td>
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<tr>
<td>• Cough after each swallow of liquid</td>
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Practice Questions
A 65 year old male with a diagnosis of a Left hemisphere CVA is on a modified diet (Dysphagia Diet Level 3) with Nectar thick liquids per the Speech Pathologist’s recommendation. You are assisting pt with feeding.

Which of the following statements is accurate?
A. He isn’t coughing during the meal so he’s not aspirating.
B. Mastication is slow; time to advance to a Regular diet.
C. His voice sounds wet and garily after a swallow of nectar thick liquid; this could indicate that he’s aspirated without a cough response.
D. All patients should tuck their chin when eating and drinking.

Question
Dysphagia is:
A. The medical term for the symptom of difficulty in swallowing
B. All behavioral, sensory and preliminary motor acts in preparing to swallow
C. Can occur in all age groups, newborns to the elderly
D. Can occur acutely (CVA) or worsen over time (Throat Cancer).
E. All of the above

Question 2
Symptoms of pharyngeal stage dysphagia that might be observed at the bedside include:
A. Drooling, right facial droop
B. Coughing/choking, wet voice quality, food sticking; pt points to throat
C. Food sticking, pt points to an area mid-chest
D. Pocketing of food in the mouth

Questions?

Thank you!

Stacey.Hoffman@hcmed.org & Sally.Gorski@hcmed.org
Hennepin County Medical Center