

Dysphagia Education

Presented By:

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Dysphagia

- A difficulty with any of the stages of swallowing

The Normal Swallow

- Oral Stage
- Pharyngeal Stage
- Esophageal Stage

Evaluation Techniques

- Bedside swallowing evaluation
- Blue dye evaluation
- Modified barium swallow study
- Fiberoptic endoscopic evaluation of swallowing (FEES)

Clinical/Bedside Swallowing Evaluation

- Completed “at bedside” or in the dining room. Can do skilled meal assessments.
- Different textures and consistencies of liquids and solids are given to the patient
- Observations are made about patient’s ability to chew and swallow safely
- If aspiration is suspected by clinical signs & symptoms, a VIDEO SWALLOW EVALUATION may be recommended for further evaluation

Video Swallow Evaluation (VSE)

- The patient is tested with a variety of liquid and food consistencies mixed with barium and then x-rayed while swallowing. The Speech Therapist will determine what diet level is safe for the patient because he/she can directly see if the patient is aspirating (even if they are silently aspirating!)

MBS



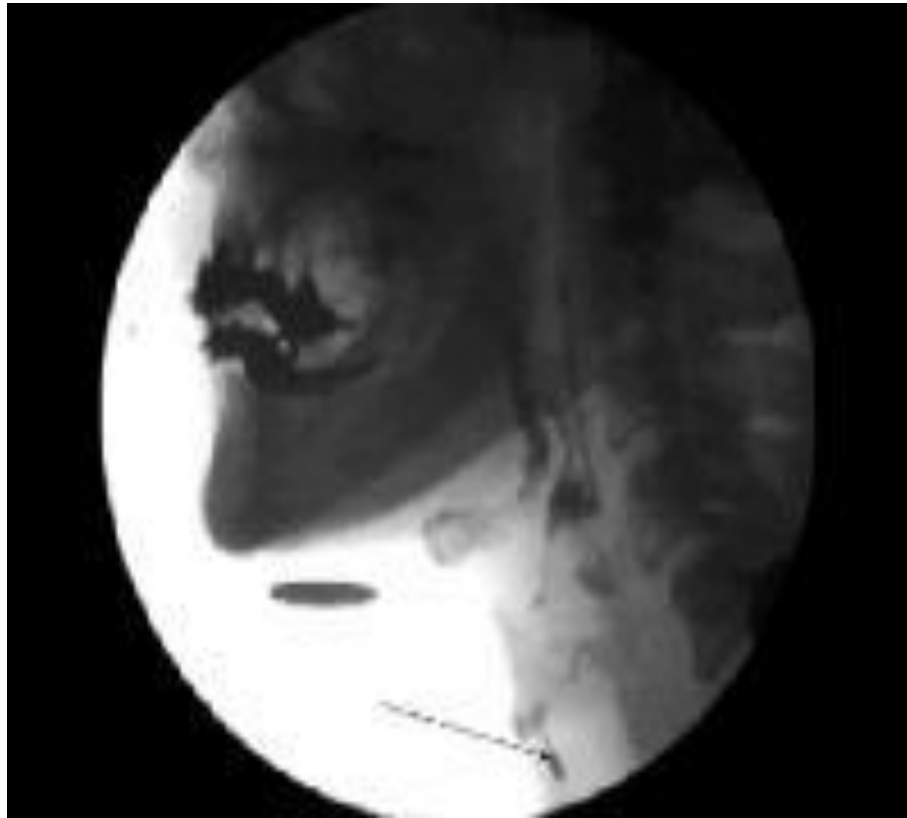
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MBS



Aspiration by MBS



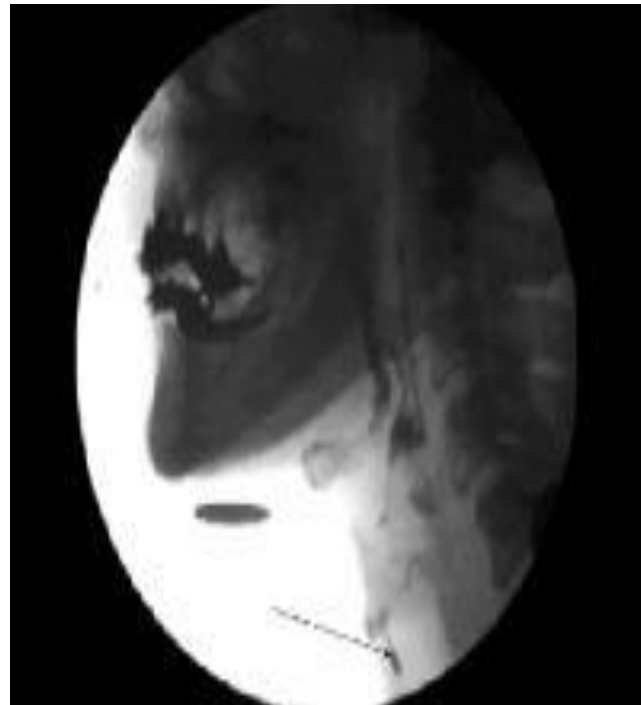
Fiberoptic Endoscopy

- Formal evaluation which involves placing a flexible scope through the nasal passageway and into the pharynx in order to observe the pharynx and larynx before and after a swallow



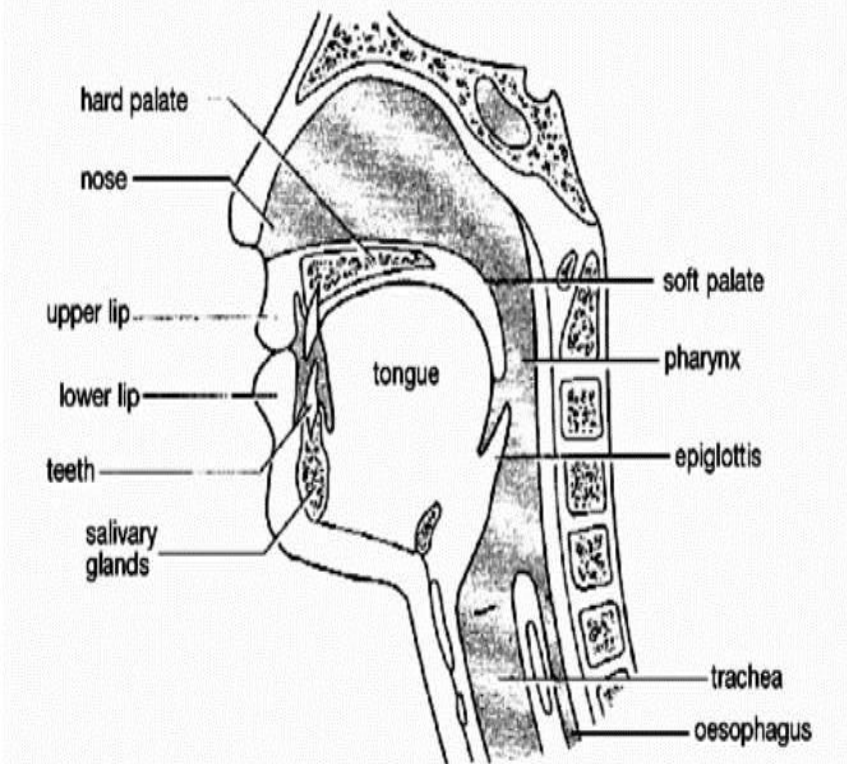
What Is Aspiration?

- Any foreign particle, i.e. food or liquid that enters the airway past the vocal cords



How aspiration occurs

Swallowing Mechanism



- Trachea (windpipe) and esophagus (food pipe) are located very close together. Loss of the ability to close off the trachea allows food and/or liquid to enter the lungs

Signs and Symptoms of Aspiration

- Secretions from nose or watery eyes
- Reddening of the face
- Change in breathing rate
- Change in lung sounds
- Audible breathing
- Attempts to clear his/her throat
- Coughing
- Gagging
- Gurgly or “wet” sounding voice

Silent aspiration

- Aspiration is directly viewed on video swallow, but the patient shows no outward signs of difficulty
- For example, they aspirate and do not cough
- 50% of all aspiration is silent
(Logemann 1998)

Signs and Symptoms of Dysphagia

Oral

- Pocketing
- Leakage
- Poor bolus formation
- Slow transport
- Swallow delay

Pharyngeal

- Coughing
- Throat clearing
- Wet, gurgly voice
- Choking
- Watery eyes
- Nasal regurgitation

Interventions and Strategies

- To decrease risk of aspiration and choking
- Use of compensatory and facilitatory strategies
 - Modify environment
 - Positioning
 - Diet levels
 - Oral-Motor Exercises

Cognitive Factors

- Attention
- Impulsivity
- Agitation
- Arousal
- Behavior

Diet Levels

Liquids

- Honey thick
- Nectar
- Thin

Solids

- Puree
- Ground
- Chopped
- Soft
- House

True Gentleman



Free Water Protocol

- New approach
- Somewhat controversial

Development of the Protocol

- Founded at Frazier Rehabilitation Hospital in Kentucky in 1984.
- Speech pathologists on Frazier's dysphagia team became concerned by lack of compliance with patients on thickened liquids diets and resulting dehydration.
 - Preparation of thick liquids at home can be burdensome, and is often abandoned after a few days or weeks.
 - Availability and cost of thickening agents and/or prepackaged thick liquids may also inhibit compliance.
- Even when adequately hydrated, patients complained of thirst! Thickened liquids did not quench their thirsts.

The Compliance Problem

At Moss:

- Patients “sneak” water at fountain, pantries, and from vases and saline bottles!
- Water pitchers sometimes end up on tray tables of patients on thick liquids

Compliance Study in Literature:

- Compliance of geriatric dysphagia patients with safe swallowing instructions:
 - Only 35% of patients were compliant with their safe swallowing techniques after just 5 days.
 - Note: all of these patients had normal cognitive function.

Facts About Water

- The body is approximately 60% water.
- Tap water is a clear neutral pH and so it is compatible with other body fluids.
- Will not cause a chemical injury as might be expected with other liquids such as coffee, tea, or soda.
- If a drink of water is aspirated, it will be absorbed by the lung mucosal tissues without harm.

AND unlike an aspirated green bean or bite of chicken, water will not obstruct the airway.

The Dehydration Problem

- Many patients are on medications which cause them to dehydrate.
- They may have altered thirst perception.
- They may have cognitive and communication deficits and have difficulty either requesting water or initiating drinking fluids
- Difficulty swallowing.
- Dislike of thickened liquids
- Dependent on others to offer fluids
- Impact of various types of thickener- some are starch-based and may lead to dehydration

The Dehydration Problem

“oral intake of thickened fluids are hugely inadequate...required the use of supplemental enteral and parenteral fluids.”

Whelan,K., *Clin Nutr.* Oct;20(5):423-8 (2001)

“Fluid intake declined over the 21 day period...pts on thickened liquid diets failed to meet their fluid requirements.”

Finestone et al;*Arch Phys Med Rehabil* 82:1744-6. (2001)

Facts

Dehydration can also lead to a variety of negative health conditions such as:

Change in drug effects

Lethargy

Constipation

Infections

Poor wound healing

Pressure sores

UTI's

Altered cardiac function

Acute renal failure

Weakness

Declining nutritional intake

Confusion

Facts

- Prepared thickened drinks are often only 4oz. servings. This almost guarantees patients will be offered less than they need.
- Most of our patients cannot get a drink for themselves.
- Drinking the recommended amount of liquids may be difficult if you are on a “honey” or “nectar” thick liquid
- Dehydration among nursing home patients is under diagnosed and reported

Quality of Life

- When recommending an altered diet, clinicians always consider the patient's quality of life. It can be a challenge to balance this with safety, hydration and nutrition needs.
- Patient's and caregivers often express concern that long-term orders for thickened liquids or tube feedings without an option for water or ice chips denies a very primitive and basic drive to refresh the senses.
- The Free Water Protocol offers a possible solution to the dilemma of keeping our patient's safety and health top priority and adding to the quality of life and satisfaction at the same time.



And hopefully, patients will be less likely to drink other thin liquids if they are successfully hydrated with water.

The Protocol

- The speech-language pathologist will determine patient candidacy for this protocol and will obtain physician orders.
- A video swallow study may be completed to determine the nature and degree of aspiration and the effectiveness of strategies in minimizing aspiration.
- Once the order is written the SLP will inform the primary nurse and place an orange wristband to indicate that the patient is on the protocol. The orange band means that the patient is on thin liquid restrictions, but may have water following the rules of the protocol.
- A sign will also be placed at bedside.

The Protocol

- Nursing will document in the plan of care.
- Patients on thickened liquids who are not appropriate for free water will not wear wristbands. Notification of diet/liquid status will continue as before..... Follow the information on the Dysphagia Guidelines card on the back of the patient's chair.
- All staff should diligently check and be familiar with the swallow guidelines for a patient before giving them any food/liquid to take by mouth.

Water Rules

- Patients on thickened liquids are allowed to have water between meals.
- However, this will be decided on a case by case basis at the discretion of the Speech-Language Pathologist.
- These patients should be offered water throughout the day.
- Ice chips may also be given with supervision

Water Rules

- Patients for whom compensations, i.e. chin tuck head turn, etc. have proven effective will continue to use these compensatory techniques when drinking water.
- Continue to use the guidelines and strategies that are posted by the Speech-Language Pathologist located on the Dysphagia Guidelines card on the back of the patient's chair.

Water Rules

- **NO water is allowed during meals or for 30 minutes after a meal.**
- For patients on oral diets, water is permitted between meals only. Water intake is unrestricted prior to a meal and allowed 30 minutes after a meal. The period of time following the meal allows spontaneous swallows and gravity to clear pooled solid or thickened liquid residues.
- Thickened liquids are to be used during meals as recommended

Medication Rules

Pills are **NOT** given with water.

Pills are never given with water due to risk of aspiration of a pill into the airway. Instead pills are given in a teaspoon of:

Applesauce
Pudding

Yogurt
Thickened liquids

Thin liquid medications should be changed to pill form or a thickening agent added when approved by the physician and or pharmacist.

Criteria for Inclusion

- Patients are NPO or currently taking honey or nectar thick liquids
- Patients are able to swallow water without demonstrating excessive coughing and discomfort.
- Patients are able to maintain alertness and arousal.
- Patients are able to elicit a timely/efficient swallow (determined by SLP)
- Patients are able to maintain upright posture

Criteria for Exclusion

- Fragile patients with acute pulmonary disorders or a history of recurrent aspiration pneumonia will not be included.
- Patients who are unable to get out of bed consistently will not be candidates.
- Patients with a fever of unknown origin will be excluded.
- Patients with thrush will be excluded until adequate treatment and resolution

Why is oral hygiene necessary?

Bacterial flora increases and is altered by disease, malnutrition, dehydration, xerostomia, over use of antibiotics, and most importantly, dental and periodontal disease.

Why is oral hygiene necessary?

- “...aspiration [of oropharyngeal organisms] is believed to be the most important [route] for both nosocomial and community-acquired pneumonia”(CDC, 1997)

Why is oral hygiene necessary?

- *Aspiration is a multifactorial event.*
 - Only 38% of known aspirators developed pneumonia
 - “...dysphagia and aspiration are necessary, but not sufficient conditions for development of pneumonia. Other risk factors must be present as well”
 - Dysphagia and aspiration were not risk factors in and of themselves

Langmore, S. et al, *Dysphagia* (1998)

Why is oral hygiene necessary?

Some patients who aspirate do not get pneumonia. Those that do may also be aspirating secretions that contain bacteria.

WHAT?????

- A dirty mouth can be a major contributing factor to aspiration pneumonia.
- If someone aspirates water, that may not be enough by itself to cause pneumonia. If someone aspirates oral bacteria along with the water then the situation can change.

Shay K., *Clinical Infectious Diseases*, 34:1215–1223 (2002)

Why Good Oral Care??

Oral care reduces pneumonia in older patients in nursing homes

Yoneyama et al, J Am Geriatric Soc, 50(3), 584-5, 2002

A variety of oral interventions improving oral hygiene through mechanical and /or topical chemical disinfection or antibiotics reduced the incidence of nosocomial pneumonia by an average of 40%

Scannapieco, et al, *Journal of Periodontology*, 8 (1):54-59 (2003)

HOW do you clean a mouth

- *Brush to clean twice daily*
- *Swab mouth in between brushings with toothette moistened in water/mouthwash throughout the day*
- *Use oral rinse in between meals throughout the day as possible*



Why it's important to clean the tongue

The tongue's surface is the main breeding ground for harmful bacteria that attack teeth & gums producing a rotten egg - smelling gases or "dragon mouth"!



IDEALLY:

For patients on the hydration protocol, have patients rinse their mouths with mouth rinse before providing water if possible.

Since this may not always be possible, the oral cavity should be checked for small food particles and cleared before water is given.

Other General Recommendations

- Increase patient activity level
- Increase out of bed time
- Chest PT/Pulmonary Hygiene to help keep the lungs clear and healthy
- Postural adjustments-keeping patients upright before and after meals.
- Change xerostomic meds

Thank You for Attending

We hope you enjoyed the presentation!

D'Anna and the Moss Speech Dept.