"Current Trends in Adult Swallowing Evaluation and Management"

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Learning Objectives

1. Participant will be able to explain the current trends and evidence in diet modification
2. Participants will be able to explain SLP's scope of practice in relation to enteral and parenteral nutrition and hydration
3. Participants will be able to gather knowledge of terminologies used by radiologists when interpreting chest imaging

Liquid Consistency!!

- Thin liquid
- Nectar thick liquid
- Honey thick liquid
- Pureed thick liquid

Evidence!!

Research study 1
"A randomized Study of three intervention for aspiration of thin liquids in patient's with Dementia or Parkinson's disease." Logemann et al., 2008

Research study 2
"Comparison of 2 intervention for liquid aspiration on pneumonia incidence" Robbins et al., 2008

"The generally accepted clinical notion that manipulation of thicker (more viscous) substances reduces occurrence of aspiration, or modifies other bolus flow characteristics in dysphagic persons that produce an "improved swallow," has little support, other than anecdotal, in the literature."

Robbins, Nicosia, Hind, Gill, Blanco & Logemann, 2002

"Thickening liquids has been and continues to be one of the most frequently used compensatory interventions in hospitals and long-term care facilities."

Robbins, Nicosia, Hind, Gill, Blanco & Logemann, 2002

Protocol 201

"A randomized Study of three intervention for aspiration of thin liquids in patient's with Dementia or Parkinson's disease"

Logemann et al., 2008

Logemann et al, 2008

Subjects
- 47 acute care hospital
- 79 sub acute care (such as SNF)
- b/n 50-95 years old

Medical condition
- Parkinson's
- Dementia
- Parkinson's + Dementia

Exclusion Criteria
- h/o of smoking
- alcohol abuse
- Head and neck cancer
- 20+ year insulin dependent
- sudden-onset, progressive, or infectious neurological disease
- No pneumonia in last 6 months

Logemann et al, 2008

Protocol

Step 1: suspicious for aspiration at bedside

Step 2: VFFS

Step 3: 6 trial swallows of thin liquid (3x, 3-ml swallow by spoon and 3 self regulated swallow by cup)

Step 4: Aspiration? Then qualified for study and randomization

Step 5: Intervention

- Primary interventions:
  - Chin down posture
  - Nectar thick liquid (without postural adjustments)
  - Honey thick liquid (without postural adjustments)

Logemann et al, 2008

Protocol continues:

Step 6: Parkinson's disease and no dementia patient were asked to rate the intervention as
- easy/pleasant
- average
- difficult/unpleasant

- 742 patients randomized
- 711 patients included in analysis

Results
346 patients (49%) aspirated on all three intervention
177 patients (25%) of participant didn't aspirate on any of the three interventions
105 patients (39%) PD aspirated on all three intervention
258 patient's (53%)with dementia (with or without PD) aspirated on all three intervention
Significantly more participants aspirated on thin liquids despite using chin-down posturing than when using nectar-thick liquids (68% vs. 63%) or honey-thick liquids (68% vs. 53%)
Significantly more participants aspirated on nectar-thick liquids than on honey thick liquids (63% vs. 53%)

Logemann et al, 2008

- Researchers hypothesis was "chin down posture would be better"
- However, result revealed:
  - Honey thick liquid "better" than nectar thick followed by chin-down posture to eliminate immediate aspiration
  - Patient's preference: Chin down compared with honey thick liquid

Logemann et al, 2008

Clinical Implications

- All intervention was not effective in 49%
- Instrumental evaluation
- Consider patient's preference

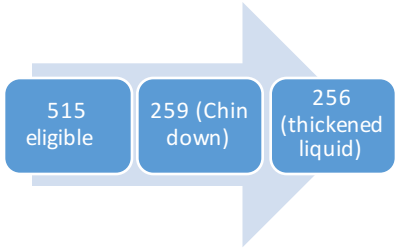
"Comparison of 2 intervention for liquid aspiration on pneumonia incidence"

Robbins et al, 2008

Robbins et al, 2008

- Long term (3-months) effects of three intervention
  - Honey thick liquid
  - Nectar thick liquid
  - Chin down posture
- Eligibility
  - Patient who aspirated during all three intervention (No condition eliminated aspiration)
  - Patient who did equally well on all three intervention (all condition eliminated aspiration GOOD!!)

Study Design



Robbins et al, 2008

Three interventions

- Chin down posture (n=259)
- Nectar thick liquid (n-133)
- Honey thick liquid (n=123)

Robbins et al, 2008

- 413 completed 3 months follow-up without incidence of pneumonia
- 39 without incidence of pneumonia followed until death
- 52 developed pneumonia (21 subsequently died)
- 11 incomplete follow-up

Result
- 11% incidence of pneumonia across all groups
- No difference between chin-down posture and thickened liquid intervention
- Nectar thick liquid had lower incidence of pneumonia compare with honey thick liquid

Clinical Implications: Robbins et al & Logemann et al (2008)

- Honey thick liquid short term benefit only
- Adverse events (Long Term):
  - Dehydration, UTI, or fever (> thickened liquid groups)
  - Diarrhea was more frequent in nectar thick liquid compared with honey thick liquid (5% vs. 0%)
  - Increased breathing difficulty in chin down posture (2% vs. 0%)
  - Median length of stay in hospital
    - 18 days (honey thick liquid)
    - 6 days (chin down posture)
    - 4 days (nectar thick liquid)

Recent Publications

- Wang, C., Charlton, B. & Kohlwes, J. (2016). The Horrible Taste of Nectar and Honey—Inappropriate Use of Thickened Liquids in Dementia: A Teachable Moment. JAMA Intern Med., 176 (6), 735-736. doi:10.1001/jamainternmed.2016.1384.

Blog:

- Negative Press Detracts from Main Issue: Decision-Making in Dysphagia (http://www.swallowstudy.com/?p=1819)
  Author: Karen Sheffler, MS, CCC-SLP; BCS-S

Tube Feeding

ASHA 2002: Knowledge and Skills

- 4.0 Role: Determination of individual's management decisions regarding methods of oral intake; risk precautions and candidacy for intervention
- 4.a. Knowledge of oral versus nonoral (e.g., parenteral and enteral) intake methods and medical risks

Preferred Practice Patterns

- Assessment of the effect of intubation on oropharyngeal swallowing (feeding tube, tracheostomy) and the effect of mechanical ventilation on swallowing

American Speech-Language-Hearing Association (2004)
Preferred practice patterns for the profession of speech-language pathology

Instrumental Assessment Guideline

Clinical Swallow Assessment

- Recommend, as appropriate, the route of nutritional management (oral vs. nonoral)

Instrumental

- Assist in determining the safest and most efficient route (oral vs. nonoral) of nutrition and hydration intake

American Speech-Language-Hearing Association (2000)
Clinical indicators for instrumental assessment of dysphagia

ASHA- Practice Portal for Adult Dysphagia

- Tube Feeding for Dysphagia Treatment

"The decision to recommend use of a feeding tube is made in collaboration with the medical team. The physician is ultimately responsible for selecting which type of tube is used."

- Percutaneous endoscopic gastrostomy (PEG) tubes may not be appropriate in all populations and may not necessarily improve outcomes or quality of life (Plonk, 2005).

http://www.asha.org/PRPSpecificTopic.aspx?folderid=85899425 5 0&section=Treatment

What can feeding tubes offer?

- Nutrition
- Hydration
- Aspiration
- Prolongation of life
- ? Quality of life

Bliss et al. (1998), *Ann Intern Med*, Lawrence et al. (2007), *Infect Control Hosp Epidemiol*, Asha et al. (2006), *Journal of Clinical Microbiology*

Help or Hinder?

- ALS
- Acute phase CVA
- Head injury
- Short-term critical care
- Cancer
  - radiation therapy
  - ENT
  - proximal bowel obstruction
- PVS

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- ALS
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  - radiation therapy
  - ENT
  - proximal bowel obstruction
- PVS
- Terminally ill
  - AIDS
  - End-stage cardiomyopathy
  - Cancer
  - COPD
  - Dementia

Other Factors

- Quality of Life
- Restrain
- Sedation
- C-diff risks

Bliss et al. (1998), *Ann Intern Med*, Lawrence et al. (2007), *Infect Control Hosp Epidemiol*, Asha et al. (2006), *Journal of Clinical Microbiology*

Radiographic Imaging

- Normal chest X-ray
- Chest Computed Tomography

Specific Terminology

- Atelectasis
- Infiltrate
- Pulmonary edema
- Pleural effusion
- Consolidation
- Opacity

Lab Values

- White blood cells (WBC)
- Neutrophil count
- ABG
- Resources to learn

http://www.swallowstudy.com/?p=1105

Penetration, Aspiration, & Residue

- Penetration-Aspiration Scale (Rosenbeck et al, 1996).
  - Penetration
  - Aspiration
  - Silent aspiration
  - 8 Point Scale
- Pharyngeal Retention Score (Eisenhuber et al, 2002)
  - 3 Point Scale

Thanks!!