DYSPHAGIA MANAGEMENT IN ACUTE CARE

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OVERVIEW

• Decision making re: swallowing in the medically compromised patient
• Swallow evaluation vs. Nursing Swallow Screening
• Instrumental assessments
• Other Services offered
DECISION MAKING

- Chart review
- History of dysphagia
- Diagnoses
- Respiratory status
- Mental status
- Nutritional status
DIAGNOSES AT HIGHER RISK FOR DYSPHAGIA

- Prolonged intubation
- CVA
- Bilateral lung transplants
- Esophagectomy
- Burn patients with inhalation injuries
- Open tracheostomy tubes
- ACDF
- Cardiac Surgery
- Dysphonia/Aphonia
- Head and neck cancer patients
- Patients with multiple medical diagnoses (renal failure, DM, COPD, cardiac history)
PROLONGED INTUBATION

What is “prolonged intubation”? In most studies, defined as greater than 48 hours (Skoretz 2014)
Why? Mucosal abrasion, laryngeal edema, decrease in laryngeal sensation
Prolonged intubation + cardiovascular surgery = increase of dysphagia tenfold (51% compared to 3-4% of any duration) (Skoretz 2014)
“Patients had a twofold increase in their odds of developing dysphagia for every additional 12 h with endotracheal tube and for every additional decade in age.”
Take home: Geriatric + recently extubated need a swallow evaluation.
CVA

- What are you neglecting? Right hemisphere CVA behaviors exacerbate dysphagia
- Reduced oral control/sensitivity
- Silent aspiration after stroke: The incidence of silent aspirators ranged from 8% (Kidd et al. 1995) to 27% (Horner et al. 1988).
- Dysphagia from hemispheric stroke usually resolves within two weeks (Neurologic 2004)
- Brainstem CVA worse dysphagia, poorer prognosis. Some improvement in 3-4 weeks post stroke, but if deficits persist for 6-7 weeks the prognosis is poor. (McCaffrey 2004)

• Aspiration occurred in 63.8% (n = 67) of positive swallow evaluation; 77.6% (n = 52) of aspiration events were clinically silent
ESOPHAGECTOMY

- Small research sample (15 patients), but one week following esophagectomy 67% of patients showed dysphagia on VFSS. 47% had laryngeal penetration or aspiration. Heitmiller 1990
- Review of our current protocol
BURN PATIENTS

- Inhalation injury: pharyngeal and laryngeal edema; prolonged intubation
- Increased nutritional needs due to catabolism and hypermetabolism
- Prolonged days prior to first oral intake leading to disuse atrophy. Ward et al (2001) indicated an average of 20 days prior to bedside swallow evaluation.
OPEN TRACHEOSTOMY TUBES

- Disruption of vocal fold function (Nash, 1988, Shaker, 2000)
- Reduced pharyngeal / laryngeal sensation (Tippet et al, 1991)
- Decreased subglottic pressure (Eibling and Gross, 1996)
- Increased risk of aspiration
ACDF

- Transient postoperative dysphagia occurred in 80% of patients (Cloward et al, 2002)
- Transient dysphagia in 45% and persistence over 6 months in 27% (Stewart et al, 1995)
- Injury to CN X is most commonly reported nerve injury associated with ACDF (Devitt et al, 2001)
- Prevertebral swelling and reduced epiglottic inversion are also prevalent post-operatively
CARDIAC SURGERY

- Patients undergoing cardiopulmonary bypass had a higher incidence of dysphagia post-operatively. 34% had dysphagia on VFSS and 90% of those aspirated with silent aspiration present in 22% (Hogue et al, 1995)
- TEE: dysphagia in 7.9 % of patients with TEE vs. 1.8% in non-TEE (Rousou et al, 2000)
- Risk of dysphagia increases by 46% for each additional hour spent in surgery (more than 4.5 hours)
- CABG + age+ prolonged intubation+ premorbid factors= increased risk for silent aspiration (Harrington et al, 1998)
OTHER DIAGNOSES

• If dysphonia/aphonia is present, there is likely laryngeal edema and/or reduced vocal fold movement which places pt. at risk for aspiration and a referral is needed.

• If pt. has a history of head and neck cancer, they are at higher risk of dysphagia and silent aspiration and a referral is needed.
BEDSIDE SWALLOW EVALUATION

- Completed by speech pathology
- Observations: respiratory status, vocal quality
- Oral Mechanism Evaluation
  - Dentition
  - Weakness? Cranial nerve involvement?
  - Oral hygiene/mucosal health
- Oral Phase
- Pharyngeal Phase: overt s/s of aspiration, timeliness of swallow, laryngeal elevation/excursion
- 3 oz water test (Suiter and Leder, 2008)
- Need for further instrumental assessment?
NURSING SWALLOW SCREENING

- Implemented March 2009 in ED and Neuro ICU and step down as requirement for JCAHO Stroke Accreditation (but no longer)
- Now expanded to 10N (trauma)
- Exclusions: Any patient with a recent history of aspiration pneumonia, with a weak or absent cough, presence of PEG or tracheostomy tube, not following commands, recent neck surgery
INSTRUMENTAL ASSESSMENTS

• Fiberoptic Endoscopic Evaluation of Swallowing (FEES): Pass endoscopic through nare and visualize pharynx/larynx while providing food/liquids to assess for aspiration and risk for aspiration

• Video-fluoroscopic Evaluation of Swallowing (VFSS) also sometimes called a Modified Barium Swallow Study (MBSS) or a “video”: completed in radiology in specialized chair (or patients’ wheelchair) with liquid barium and barium in foods
BENEFITS: FEES VS VFSS

- Weight limit for VFSS (350 lbs)
- Positioning for VFSS
- Variable alertness and difficulty scheduling VFSS
- Able to see tissues/structures/vocal fold
- Patients that are unable to be easily transported (in hospital CVICU and burn patients)
- Allows for better visualization of secretions
- Can see trace aspiration which is sometimes missed on VFSS
QUESTIONABLE APPROPRIATENESS FOR FEES

- Agitated or significantly confused
- Significant concern for esophageal phase involvement (but could also go for separate esophagram)
- History of recent ACDF or known cervical osteophytes
- Recent facial fractures (need clearance from team)
- Large bore NG tube + dobbhoff tube
OTHER SERVICES

- Passy muir valve placement
  - Size of tracheostomy tube (all have 15 mm hub)
  - In-line with ventilator for long-term vent patients
- Speech-language/Cognitive Evaluations
  - TBI, CVA, Anoxic brain injury following cardiac arrest/rewarming, Dementia, etc.
QUESTIONS???

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