Feeding & Swallowing Assessment & Interventions in Infants

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Feeding & Swallowing Evaluation

- Role
  - Identify Structural, Physiological, Sensory or Behavior Based Oral/Pharyngeal/Esophageal Deficits That May Contribute to the Child’s Inability to Take Adequate Nutrition Orally.
  - Provide Recommendations &/or Treatment to Facilitate a Safe Means to Establish and Maintain Adequate Nutrition Orally.
  - Preservation &/or Habilitation of Oral Motor and Pharyngeal Skills in Non-Oral Feeders.

Feeding & Swallowing Evaluation

- Fullfilling all of the child’s needs
  - The Multisystem, Integrated Nature of Infant Feeding (Wolf & Glass, 1992)
    *Must Fulfill All Areas For Effective Feeding
      - Physiologic
        - Respiratory, Cardiac, Autonomic (plus “Competent GI Function”)
      - Motor
        - Suck, Swallow, CNS Integrity
      - Parental Attributes
        - Emotional Status, Parental Skill / Knowledge
      - Organizational Abilities
        - State Control, Behavior
      - Plus “Appropriate Resources” ($$, & Family Support)

Feeding & Swallowing Evaluation

- 0-4 Months
  - Suck / Swallow / Breathe

- 4-6 Months
  - With maturation, mandibular growth brings increased space for the tongue. The pharynx elongates with the hyoid, epiglottis, & larynx descending in relation to the soft palate. This creates the structural & physiological changes for transition to the volitional suck / swallow pattern.
    - Key period of development for both diagnostic & treatment considerations
Feeding & Swallow Evaluation

- Autonomic Stress Cues*
  - Moderate Stress Cues: Sighing, Yawning, Sneezing, Sweating (Diaphoresis), Hiccupping, Tremoring, Startling, Gasping, & Straining.
  - Major Stress Cues: Coughing, Spitting up, Gagging, Choking, Color Change, Respiratory Pauses, & Irregular Respirations.

(Wolf & Glass, 1992)

- Warning Signs of Aspiration &/or Dysphagia
  - Difficulty coordinating suck/swallow/breathe sequence.
  - Turning away, crying, arching, &/or Fussy behaviors during feeds.
  - Coughing, choking, or throat clearing before/during/after swallow.
  - Hoarse, breathy, whispered voice - ? TVC or airway involvement.
  - Tracheostomy – Excessive secretions/congestion, or liquid/food in trach secretions.
  - History of pneumonia.
  - Lung congestion with fever, or upper respiratory congestion.
  - “Asthma” symptoms which don’t respond to normal treatment.
  - Wet vocal quality / audible pharyngeal pooling.
  - Excessive drooling.
  - Fluctuating level of alertness.
  - Difficulty chewing – loss of bolus control.
  - Complaint: food “stuck” in throat, or “multiple swallows / bolus”.
  - Regurgitation of food.

- IMPRESSIONS
  - Diagnostic Statement
  - Strengths & Weaknesses
  - Prognosis

- RECOMMENDATIONS / PLAN
  - Oral vs. Non-Oral
  - Best Mode of Oral Intake (if Oral is Safe)
    - Best Textures to Meet Nutrition Orally
    - Compensatory Strategies
    - Equipment / Modifications
    - Feeding Techniques / Parent Training / Treatment
  - Further Testing / Work Up
Specific Treatment Strategies

- **Compensatory Strategies**
  - Feeding Techniques
    - Positioning
      - Upright 30-45 degree
      - Supine or Prone
      - 90 Degrees Upright
    - Head, Neck, Trunk Support
  - Verbal / Body Language
    - A positive & nurturing feeding environment, with verbal interaction & bonding during the meal time.

Specific Treatment Strategies

- **Suck-Swallow-Breathing Treatment Strategies**
  - Weak Suck
    - Jaw/Cheek Support, Slight Retraction of Nipple From Mouth
    - Dr. Brown, Haberman, Pigeon can be used
  - Prolonged Sucking (Feeding Induced Apnea)
    - Pacing, Decreased Flow Rate, Dr. Brown
  - Short Sucking Bursts
    - Dysfunctional Swallow vs. Respiratory Difficulties
    - Decreased Flow Rate
  - Disorganized Sucking
    - External Stabilization, Bundling, Reduced Sensory Stim., External Rhythms (Rocking, Soft Music)
    - Decreased Flow Rate
    - Ensure Adequate Respiratory Support

Specific Treatment Strategies

- **Thickening Formulas or Breast Milk**
  - Formulations:
    - Thick It (Starch base)
    - Rice Cereal
    - Simply Thick (Gum tree base)
    - Baby Foods (use only after 4 months of age)
  - Breast Milk
    - Simply Thick: simplythick.com
    - Baby Foods (use only after 4 months of age)
    - Remember Flow Rate is Altered!!

Specific Treatment Strategies

- **Poor Weight Gain / Failure to Thrive**
  - Specific Treatment Strategies: Breast &/or Bottle
    - R/o psycho-social contributory factors & resolve issues
    - Parent education & training!!!
      - Lactation Consult
      - Estimate Output (EMM volume)
      - Feeding / Swallowing Contributory Factors
  - Supplemental vs. total bottle feeding
    - Fortified EMM vs. formula
  - Supplemental / complete tube feeding
    - Fortified EMM vs. formula
    - Maintain oral skills while on TF
      - Continue feeding regimen and oral intake in (at least) small quantities
    - Ht/wt Ratio to ideal %tile, and then Wean TF
      - Weight maintained as oral intake increases & TF decreased

References