VACTERL Association and Feeding

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VACTERL and Feeding

- What are some of the feeding issues specific to VACTERL?
- What is a feeding team and how can it help your child?
VACTERL and Feeding

- V - Vertebral anomalies (~70%)
- A - Anal atresia (~55%)
- C - Cardiovascular anomalies (~75%)
- T - Tracheoesophageal fistula (~70%)
- E - Esophageal atresia (~70%)
- R - Renal (Kidney) anomalies (~50%)
- L - Limb anomalies (~70%)
- S - Single umbilical artery (~35%)
VACTERL and Feeding

- V - Vertebral anomalies
  - Does not generally impact feeding
  - Tethered cord can lead to constipation

- A - Anal atresia
  - Constipation after repair of imperforate anus
  - Nobody wants to eat if their abdomen is full of stool
VACTERL and Feeding

- **C - Cardiovascular anomalies**
  - Feeding is exercise for infants
    - Some cardiac anomalies can lead to fatigue during feeding
  - Cardiac surgery can result in damage to the nerve (recurrent laryngeal) that controls the vocal folds
    - This can lead to increased risk for aspiration
  - Prolonged intubation after cardiac surgery can lead to oral aversion
VACTERL and Feeding

- **T - Tracheoesophageal fistula**
- **E - Esophageal atresia**
  - Post-operative tracheal stenosis
    - Difficulty breathing can lead to difficulty feeding
  - Esophageal strictures
    - Can lead to difficulty swallowing, discomfort with feeding
  - Abnormal esophageal motility
    - Abnormal development and innervation
    - Can lead to difficulty swallowing, discomfort with feeding, and GE reflux
VACTERL and Feeding

- **T** - Tracheoesophageal fistula
- **E** - Esophageal atresia
  - Gastroesophageal reflux (heartburn)
    - Refluxing of stomach materials into the esophagus can cause discomfort from the stomach acid
    - Children who have reflux +/- vomiting may learn that eating leads to pain
    - Reflux in any child can lead to a feeding aversion
VACTERL and Feeding

- T - Tracheoesophageal fistula
- E - Esophageal atresia
  - Gastroesophageal reflux (heartburn)
    - Refuse to eat because they would rather have the pain of hunger than the pain from reflux
    - Learn they are more comfortable with small, frequent feedings
    - Prefer to drink instead of eat to wash down the acid
    - Have inconsistent oral acceptance
    - Feed better when sleepy
    - Have difficulty progressing textures
VACTERL and Feeding

- **R** - Renal (Kidney) anomalies
  - Most do not impact feeding

- **L** - Limb anomalies
  - Difficulty self-feeding
  - Trouble with positioning for feeding

- Slow growth
  - May start intrauterine, especially if there is a single umbilical artery
  - Nutritional support
What is a Feeding Team, and how can one help you and your child?
Team Members

- Medical – Physicians and Nurse Practitioners
- Medical Assistant
- Nutritionists
- Speech and Language Pathologists
- Occupational Therapists
- Behavioral Health – Pediatric Psychologists
- Social Worker
- Clinical Feeding Specialists
- Manager
- Administrative assistants
What does a Feeding Team do?

- Medical
  - Complete history and physical looking for medical factors contributing to feeding disorders
    - GI Disorders
      - GE reflux
      - Constipation
      - Food allergies
      - Eosinophilic Esophagitis
    - Neurologic, Genetic, Metabolic disorders
    - Autistic spectrum
What does a Feeding Team do?

- **Dietitian**
  - Full dietary history
  - Evaluate growth parameters
  - Suggest micro and macro nutrient supplements
    - Nutritious beverages
    - Calorie boosting
    - Vitamins/minerals
    - Supplemental tube feeds
What does a Feeding Team do?

- Speech Pathology
  - Co-presenter, Susan McCormack, M.A., CCC-S

- Occupational Therapy
  - Fine motor/Self-feeding
  - Positioning
  - Sensory processing
What does a Feeding Team do?

- Behavioral health (psychology)
  - Mealtime structure
  - Refusal behaviors
  - Intensive Day Hospital Feeding Program
Day Hospital Feeding Program

- Medical/nutritional issues (i.e. reflux, eosinophilic esophagitis, failure to thrive) must be under control before patient is admitted
- 6 patient capacity
- Typically 4 week admission
  - Monday - Friday, 8:30 am - 4:30 pm
- 3 meals per day by Feeding Therapists using Applied Behavior Analysis (ABA)
  - Desired behaviors rewarded
  - Undesired behaviors ignored
- Parents watch through one-way mirror, meals recorded on DVDs
- Parents are trained during second part of admission
- All patients followed by Nutrition and Medical
- All families assessed at admission by Social Work
- Patients may receive OT and/or ST depending on their needs
- Patients seen for follow-up two weeks after discharge, then monthly
- If doing well, ABA protocol gradually phased out
Contact information

- To do an intake: 215-590-7500
- General questions:
  - Sherri Cohen, MD, MPH, Medical Director
    - 267-426-0073, cohens@email.chop.edu
  - Andrea Mattie, MSW, Manager
    - 267-426-5624, mattie@email.chop.edu
- Website
  - [www.chop.edu](http://www.chop.edu), type “feeding” in the search box, then click on the second option
  - [http://www.chop.edu/consumer/jsp/division/generic.jsp?id=70529](http://www.chop.edu/consumer/jsp/division/generic.jsp?id=70529)