



Failure to Thrive and Feeding Techniques

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July 2009 • Volume 4

Pediatric Nursing Clips by Pediatric Advanced Practice Nurses at Dayton Children's provides quick reviews of common pediatric conditions.

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CASE STUDY

Travis is an 8-month-old infant who presents to his nurse practitioner as a new patient. Past medical history is significant for diagnoses by the previous provider of failure to thrive and gastroesophageal reflux. Travis was born at 36 weeks gestation to a mother with two other children. While his birth was uncomplicated, Travis had difficulty with feeding in the nursery. His mother describes a weak suck with extended feeding time. He frequently spits up formula into his mouth and through his nose. There has been one hospitalization for vomiting and dehydration. He was treated for reflux with Zantac. Increased calorie, thickened formula has been prescribed, but weight gain has continued to be poor. Travis' weight has fallen from

the 25th percentile at birth to less than the 3rd percentile. Children's Protective Services (CPS) has been contacted about possible parental neglect.

Travis' mother expresses fear that something is wrong with her child. During a review of formula preparation, she demonstrates accurate measurement of the increased calorie formula that was previously prescribed. The diaper bag is stocked with appropriate supplies for the day.

On physical exam the child appears small and thin for age. He is alert and in no apparent distress. A small amount of dried formula is visible in the nose. Motor milestones are one to two months less than expected for age. Inspection of the

palate reveals a partial cleft of the posterior hard palate and complete cleft of the soft palate (congenital malformation). Travis is referred to the cleft lip and palate team clinic and subsequently scheduled for surgery to repair the cleft palate. Travis' mother received additional information on cleft palate and assistance with feeding techniques.

Travis responded well to the adapted feeding techniques and surgical correction. At his 12 month well-child check, his weight had increased by 4lbs in three months, placing him in the 25th percentile. Travis visits with the cleft lip and palate team regularly for follow up on his development and monitoring of surgical needs as he grows.

CASE DISCUSSION

Failure to thrive (FTT) describes a young child who has not gained weight or grown as expected. This may include a child younger than 2 years of age whose:

1. weight is less than 80% of the ideal,
2. weight is below the 3rd or 5th percentile on more than one occasion, or
3. weight change crosses two major percentiles.

While a diagnosis of FTT describes the presentation of the child on the growth chart and points to concerns about malnutrition, it does not explain the reason for difficulty with growth. A thorough history and complete physical are key to determining if the child's presentation is a variation of normal or a sign of a serious problem.

FTT was historically classified as either organic (a problem originating from issues within the child) or nonorganic (originating from factors in the environment); however, the issues are often complex with overlap seen in biological and psychosocial contributory factors.

The first step in the evaluation of a child with suspected FTT is to engage the family in a nonthreatening discussion of their concerns and the child's history. Feeding problems can leave parents feeling frustrated and fatigued. A sense of trust between the provider and the family is essential to sorting out the differential diagnoses and establishing a plan of care.

Inadequate growth is a complex problem however it can generally be attributed to one of three primary

factors: inadequate intake of calories, inadequate calorie absorption or excessive calorie expenditure. Some of the differential diagnoses for each category are:

Inadequate Intake of Calories

Improper formula preparation
Unusual dietary restrictions
Inadequate opportunities for feeding
Neurological disorders with impaired swallowing
Congenital abnormalities
Metabolic diseases
Anorexia due to a disease process

Inadequate Calorie Absorption

Persistent vomiting or diarrhea
Gastroesophageal reflux
Malabsorptive states
Diabetes mellitus
Inborn errors of metabolism

Continued from the front.

Excessive Calorie Expenditure

Sepsis
Trauma
Burns
Chronic respiratory distress
Hyperthyroidism
Congenital heart disease
Toxins (lead)

A detailed history and observation of feeding by the family are important first steps in the assessment process. The history should include any birth problems, health problems, growth patterns, developmental milestones and social history. The results of the newborn metabolic screen should be reviewed. Important points in the feeding history should

include breast and/or bottle-feeding patterns, infant formulas used and any difficulties with the process of feeding the infant. Breast-feeding mothers should be asked about their own diet and health.

The family should then be asked to prepare a bottle and feed the child while the provider is in the room. This can provide valuable information on the family's understanding of appropriate feeding. Points to observe are the accuracy of formula base to liquid and the amount offered to the child. Observation of feeding also lets the provider assess the parent/child interactions, child's tolerance of feeding and ability to suck, swallow, and coordinate breathing. This observa-

tion can provide valuable information and help the provider work through the list of differential diagnoses for the most likely problems. The provider will then determine the need for further evaluation, testing, follow up and resources for the family.

REFERENCES

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For more information on developmental pediatrics or cleft lip and palate team clinic, call 937-641-4073.



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