Psychosocial Issues

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SECTION 5

Chapter 21

FAILURE TO THRIVE

Failure to thrive (FTT) is a descriptive term given to malnourished infants and young children who fail to meet expected standards of growth. FTT is most often used to describe malnutrition related to environmental or psychosocial causes. In many children with inadequate growth, however, organic and environmental contributors coexist, underscoring the importance of assessing potential medical, nutritional, developmental, psychosocial, and environmental contributors in all cases.

FTT is often diagnosed by weight that falls or remains below the 3rd percentile for age; decreases, crossing two major percentile lines on the growth chart over time; or is less than 80% of the median weight for the height of the child. Caveats to these definitions exist. According to growth chart standards, 3% of the population naturally falls below the 3rd percentile. These children, who typically have short stature or constitutional delay of growth, usually are proportional (normal weight for height). Additionally in the first few years of life, large fluctuations in percentile position can occur in normal children. Changes in weight should be assessed in relation to height (length) and head circumference.

Weight that decreases from a disproportionately high percentile to one that is proportional causes no concern, but weight that decreases to a disproportionately low percentile is of concern. Allowances must be made for prematurity; weight corrections are needed until 24 months of age, height corrections until 40 months of age, and head circumference corrections until 18 months of age. Although some growth variants can be difficult to distinguish from FTT, growth velocity and height-for-weight determinations can be useful in distinguishing the cause. In children with FTT, malnutrition initially results in wasting (deficiency in weight gain). Stunting (deficiency in linear growth) generally occurs after months of malnutrition, and head circumference is spared except with chronic, severe malnutrition. FTT that is *symmetric* (proportional weight, height/length, and head circumference) suggests long-standing malnutrition, chromosomal abnormalities, congenital infection, or teratogenic exposures. FTT is a common problem in pediatrics, affecting 5% to 10% of young children, 3% to 5% of children admitted to hospitals, and 15% of children living in poverty and foster care.

ETIOLOGY

Because possible causes of growth failure are diverse and often multifactorial, the management of FTT begins with a careful search for its etiology (Table 21-1). The common causes of FTT vary by age, which should be reflected in the evaluation (Table 21-2). In most cases, a comprehensive history and physical examination are sufficient to suggest or eliminate medical disease as the primary cause of FTT. Medical diseases are diagnosed in fewer than 50% of children hospitalized for growth failure and even less frequently in children managed in the outpatient setting. Growth failure is often a manifestation of more extensive family problems. It is clinically useful to categorize the causes of malnutrition into inadequate nutritional intake, inadequate nutrient absorption, or increased metabolic demand.

DIAGNOSIS AND CLINICAL MANIFESTATIONS

Decision-Making Algorithm
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Failure to Thrive

A medical history should include prenatal history prematurity, birth size (weight, length, and head circumference), as well as family and travel history. Indicators of medical diseases, such as vomiting, diarrhea, fever, respiratory symptoms, and fatigue, should be noted. A careful diet history is essential. Lactation problems in breastfed infants and improper formula preparation are frequent causes of growth failure early in infancy. It is crucial to evaluate intake of solid foods and liquids for older infants and children. Due to parental dietary beliefs, some children have inappropriately restricted diets; others drink excessive amounts of fruit juice, leading to malabsorption or anorexia. The child's daily meal schedule (timing, frequency, location) should also be noted. Mealtime practices, especially distractions that interfere with completing meals, can influence growth. A complete psychosocial assessment of the child and family is required. Child factors (temperament, development), parental factors (depression, domestic violence, social isolation, mental retardation, substance abuse), and environmental and societal factors (poverty, unemployment, illiteracy, lead toxicity) all may contribute to growth failure.

A complete physical examination and developmental screening should assess signs of inflicted injury; oral or dental problems; indicators of pulmonary, cardiac, or gastrointestinal