FTT

Dr Khoshnevis

تعریف و اهمیت

کاهش تدریجی سرعت رشد از الگوی تثبیت شده

عوارض ضایعه غیر قابل برگشت در دستگاه عصبی مرکزی و تاخیر ذهنی تکاملی در شیرخوار

- شیرخوار 8 ماهه ای به دلیل کاهش وزن (وزن کنونی 7 کیلو) ارجاع شده است.نامبرده هفته پیش بدلیل گاستروآنتریت در بیمارستان بستری بود و وزن کودک که دو هفته پیش اندازه گیری شده بود 8 و نیم کیلو بوده است.قد و دور سر نرمال و معاینات کودک طبیعی است.
- آیا کودک FTT دارد؟

- The most common definition is ***weight*** less than the **3rd** or **5th** ***percentile*** for age on more than one occasion, or
- ***weight*** measurements that *fall* 2 major percentile lines using the standard growth charts of the National Center for Health Statistics (NCHS)

(MEDscape)

Parents bring their 6-month-old son to see you. He is symmetrically less than the fifth percentile for height, weight, and head circumference. He was born at 30 weeks' gestation and weighed 1000 g. He was a planned pregnancy, and his mother's prenatal course was uneventful until an automobile accident initiated the labor. He was ventilated for 3 days in the intensive care unit (ICU) but otherwise did well without ongoing problems. He was discharged at 8 weeks of life. Which of the following is the mostly likely explanation for his small size?

- A. Chromosomal abnormality
- B. Protein-calorie malnutrition
- C. Normal ex-premie infant growth
- D. Malabsorption secondary to short gut syndrome
- E. Congenital hypothyroidism

C. The expected weight versus age must be modified for a preterm infant. Similarly, growth for children with Down or Turner syndrome varies from that for other children. Thus, use of an appropriate growth curve is paramount. For the child in the question, weight gain should follow or exceed that of term infants. For this premature infant, when his parameters are plotted on a "premie growth chart," normal growth is revealed

- در شیرخوار نارس وزن تا 24 ماهگی،قد تا 40 ماهگی و دور سر تا 18 ماهگی متناسب با سن حاملگی اصلاح میشود.

اتیولوژی

- ارگانیک (28%)
- غیر ارگانیک (46%)
- مختلط (26%)

A mother brings her 12-month-old child, a new patient for your clinic, for a well-child visit. The infant appears to be small for her age. Her weight is below the 5th percentile on standardized growth curves (50th percentile for an 8-month-old), her length is at the 25th percentile, and her head circumference is at the 50th percentile. Her vital signs and her examination otherwise are normal.

- ➤ What is the next step in the management of this patient?
- ➤ What is the most likely diagnosis?
- ➤ What is the next step in the evaluation?

- *Summary: A 12-month-old girl has poor weight gain, but no etiology is found* on examination.
- ➤ **Next step: Gather more information, including birth, past medical, family,** social, and developmental histories. A dietary history is especially important.
- ➤ **Most likely diagnosis: Failure to thrive (FTT), most likely "nonorganic" in** etiology.
- ➤ **Next step in evaluation: Limited screening laboratory testing to identify** organic causes of FTT, dietary counseling, and frequent office visits to assess weight gain.

Based on pathophysiology FTT is classified as

1. Inadequate caloric intake
2. Inadequate absorption
3. Increased caloric requirement
4. Defective utilization of calories

علل تاخیر رشد ارگانیک

- کاهش دریافت مواد غذایی
  - بی اشتهایی و تهوع استفراغ بیماری مزمن
  - دهیراتاسیون و اختلال الکترولیتی
  - اختلال بلع
  - بیماری انگلی
  - رژیم درمانی نامتعادل
  - یاتروژنیک
- اختلال در هضم و جذب مواد غذایی
  - بیماری معده
  - بیماری روده کوچک (سلیاک اسهال مزمن)
  - بیماری پانکراس
  - بیماری کبدی
  - بیماری انگلی

علل تاخیر رشد ارگانیک

- افزایش اتلاف مواد غذایی
  - سوختگی
  - سندرم نفروتیک و RTA
  - آنتروپاتی اتلاف پروتئین
  - اسهال مزمن
  - خونریزی مزمن گوارشی
- افزایش نیاز و متابولیسم
  - بیماری التهابی
  - تب
  - بدخیمی
  - هیپرتیروئیدی و بیماری غدد
  - اختلال ارثی متابولیسم

بیماریهای ارگانیک

- بیماریهای رفتاری وروانی
  - Abuseواختلال رفتاری والدین
- نرولوژیک
  - CP
- کلیوی
  - Recurrent UTI
- غددی
  - دیابت
- ژنتیک متابولیک و ارثی
  - ارگانیک اسیدمی
- بیماری گوارشی
  - استنوز پیلور
  - سلیاک
  - فیبروز کیستیک
  - هیرشپرونگ
- قلبی
  - CHD
- ریوی
  - آسم
  - CF
- متفرقه
  - کلاژن واسکولر

انواع FTT

تیپ 1: وزن↓ ، قد و دور سر نرمال (سو تغذیه حاد)

Cont'd...

- ***Under-feeding*** is the single commonest cause of FTT
- 95% of cases of FTT → inadequate food
- peak incidence of FTT the age of 9–24 mo
- No significant gender difference
- Majority of children ≤18 months old
- Uncommon after the age of 5 years

- تیپ 2:وزن ↓،قد ↓ و دور سر نرمال
- (سرشتی، فامیلی ،هورمونی و دیستروفی استخوانی)

- تیپ 3:وزن ↓،قد ↓ و دور سر نرمال ↓(علل داخل رحمی)

A 13-month-old child is noted to be at the 25th percentile for weight, the 10th percentile for height, and less than the 5th percentile for head circumference. She was born at term. She was noted to have a small head at birth, to be developmentally delayed throughout her life, and to have required cataract surgery shortly after birth. She currently takes phenobarbital for seizures. Which of the following would most likely explain this child's small size?

- A. Congenital cytomegalovirus (CMV) infection
- B. Down syndrome
- C. Glycogen storage disease type II
- D. Congenital hypothyroidism
- E. Craniopharyngioma

A. **The developmental delay, intrauterine growth retardation** (including microcephaly), cataracts, seizures, hepatosplenomegaly, prolonged neonatal jaundice, and purpura at birth are consistent with a congenital cytomegalovirus (CMV) or toxoplasmosis infection. Calcified brain densities of CMV typically are found in a periventricular pattern; in toxoplasmosis, they are found scattered throughout the cortex.

تشخیص و شرح حال

- شرح حال قبل از تولد
- شرح حال خانوادگی
- زایمان و دوران نوزادی
- شرح حال رشد وتغذیه
- شرح حال طبی کودک مثل واکسیناسیون و تکامل وسابقه بیماری
- مروری بر دستگاهها
  - (اختلال در بلع، بی اشتهایی، وضعیت اجابت مزاج ، تب ریفلاکس، سوزش ادرار و فعالیت فیزیکی)
- شرح حال اجتماعی
  - (شغل والدین، نحوه مراقبت در منزل، مهد کودک، استرس مثل طلاق،و سوء رفتار

A 2-year-old boy had been slightly less than the 50th percentile for weight, height, and head circumference, but in the last 6 months he has fallen to slightly less than the 25th percentile for weight. The pregnancy was normal, his development is as expected, and the family reports no psychosocial problems. The mother says that he is now a finicky eater (wants only macaroni and cheese at all meals), but she insists that he eat a variety of foods. The meals are marked by much frustration for everyone. His examination is normal. Which of the following is the best next step in his care?

- A. Sweat chloride testing
- B. Examination of the eyes for retinal hemorrhages
- C. Reassurance and counseling for family about childhood normal
- developmental stage
- D. Testing of stool for parasites
- E. Magnetic resonance imaging (MRI) of the brain

C. Between 18 and 30 months of age children often become "picky eaters." Their growth rate can slow, and the period can be distressing for families. Calm counseling of parents to provide nutrition, avoid "force-feeding," and avoid providing snacks is usually effective. Close follow-up is required.

تشخیص: معاینه

- علائم حیاتی
  - هیپرتانسیون:نارسایی کلیه
  - هیپوتانسیون:نارسایی آدرنال
- پوست
  - کاندیدیاز :نقص ایمنی
  - اریتم ندوزوم:کولیت اولسوز
  - اگزما: آلرژی و بیماری متابولیک
  - اکیموز و رنگ پریدگی: آنمی و سوء رفتار
- سرو گردن و گوش و حلق و بینی
  - ریزش مو
  - بزرگی تیروئید
  - یوئیت و کاتاراکت
  - استوماتیت (کرون) و تاخیر دندان
- قفسه سینه
  - خس خس: فیبروز کیستیک و آسم
- قلب و عروق
  - سوفل :ناهنجاری مادرزادی
- شکم
  - اتساع و افزایشBS : سوئ جذب
  - هپاتواسپلنومگالی::بیماری کبد و بدخیمی و ذخیره ای
- تناسلی ادراری
  - بثورات:غفلت و اسهال
  - ناهنجاری: آندوکرینوپاتی
- رکتوم
  - فیستول: کرون
  - آمپول خالی : هیرشپرونگ
- اندامها
  - ادم:هیپوآلبومینمی
  - ازبین رفتن توده عضلانی:سوءتغذیه
  - کلابینگ: بیماری مزمن ریه
- سیستم عصبی
  - رفلکسها:فلج مغزی
  - فلج اعصاب جمجه ای: اختلال بلع
  - تاخیر تکاملی:تغییر در مصرف کالری

Red Flag Signs and Symptoms Suggesting Medical Causes of Failure to Thrive

- Cardiac findings suggesting congenital heart disease or heart failure (e.g., murmur, edema, jugular venous distention)
- Developmental delay
- Dysmorphic features
- Failure to gain weight despite adequate caloric intake
- Organomegaly or lymphadenopathy
- Recurrent or severe respiratory, mucocutaneous, or urinary
- Infection
- Recurrent vomiting, diarrhea, or dehydration

تشخیص : پاراکلینیک

- CBC
- ESR
- U/A
- الکترولیتهای سرم
- بررسی سن استخوانی

پایان