SHORT STATURE REFERRAL GUIDELINE

MAINE MEDICAL PARTNERS - PEDIATRIC SPECIALTY CARE (DIV. OF ENDO & DIABETES) • 887 CONGRESS ST, SUITE 100, PORTLAND, ME • (207) 662-5522

HIGH RISK

SUGGESTED EMERGENT CONSULTATION

SYMPTOMS AND LABS

Child of any height with growth failure or abnormal slowing of growth velocity (‹ 4-5 cm/year) that is not explained by downchanneling** OR constitutional growth delay

Any child with concerns for a genetic disorder (eg. Turner, Prader-Wili, Noonan, Russel-Silver)

IUGR with lack of catch-up linear growth by age 2 years

SUGGESTED PREVISIT WORKUP

Bone age

Discuss labs with endocrinology, consider: TSH, free T4, IGF-1, IGFPB3, GH, CMP, CBC with diff, TTG-IgA, total IgA, ESR

Severe hypothyroidism can cause total growth arrest even if GH production is normal

MODERATE RISK

SUGGESTED CONSULTATION OR CO-MANAGEMENT

SYMPTOMS AND LABS

Height ‹ 3rd percentile

AND

Normal growth velocity

OR

Slow downward trend in height percentile between 18-36 months that stabilizes after age 3

OR

Concerns for early puberty

SUGGESTED WORKUP

Bone age recommended

Delayed bone age in otherwise healthy children suggests constitutional delay and conservative management may be appropriate for primary care providers comfortable with this condition

Consider, height, weight checks every 4-6 months, consider screening labs (red box)

Constitutional delay is a diagnosis of exclusion, consider endocrine referral

LOW RISK

SUGGESTED ROUTINE CARE

SYMPTOMS AND LABS

Height ›= 3rd percentile

Normal growth velocity

Family history of short stature or constitutional delay

No concerns for early puberty

Normal BMI

SUGGESTED MANAGEMENT

Children growing in low percentile range but with normal growth velocity and above criteria can generally be managed conservatively

Growth hormone is not used in otherwise healthy children with current or predicted height* in the 2nd-5th percentile range

Slow weight gain with normal linear growth is more like to be a GI disorder than an endocrine problem, consider GI referral for such cases

CLINICAL PEARLS

- Mark mid-parental height (MPH) on the growth chart. For boys: MPH in cm = (mom+dad+13)/2, for girls = (mom+dad-13)/2
- Compare MPH to child's height percentile. Eg. Concerning if MPH is 90th percentile and child is growing at 10th percentile.
- GV (Growth velocity) in cm/yr = (current ht-past ht)/weeks between measurement x 52, best if measurements 4-6 months apart.
- Use height velocity chart to assess if GV is normal, eg. Normal Infants grow 10 cm/year then decrease to 4-5 cm/year just prior to the pubertal surge when growth velocity can exceed 10 cm/year.
- *The best way to estimate adult height is with a bone age (using Bayley-Pinneau tables) in children older than age 6-7. Predicting adult height by extrapolating current height percentile may be very inaccurate.
- "Downchanneling" is physiologic decrease in height percentile to midparental height percentile by age 2-3 years.
- Remeasure height if only a single value has caused concern.

Maine Medical PARTNERS

2/17