**Growth Hormone Excess Evaluation**

1. Growth velocity
2. Bone age, predicted adult height, midparental height
3. IGF-1, GH, PRL

**Abnormal labs +/- growth acceleration**
- Evaluate for PP and/or hyperthyroidism
- Monitor growth velocity q 6 mo
- Consider repeat labs and/or OGTT

**Equivocal (normal to mildly elevated labs +/- normal to mild growth acceleration)**
- Monitor growth velocity
- Repeat IGF-1 and OGTT in 4-6 months
- Consider frequent GH sampling
- Consider treatment if clinical signs of GH excess

**Normal labs, growth acceleration**
- Normal OGTT
- MAS-associated GH excess

**Normal labs, no growth acceleration**
- No MAS-associated GH excess

**Abnormal OGTT**
- Mas-associated GH excess

**Normal OGTT**
- Oral Glucose Tolerance Test

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1To be performed at initial presentation in all patients suspected of having MAS, regardless of clinical symptoms. 2The majority of patients with MAS-associated GH excess will have prolactin co-secretion. 3Practitioners may consider pituitary MRI in patients suspected of having MAS-associated GH excess, however findings may be non-specific and rarely change management. 4There are a variety of techniques for frequent GH sampling. Ours involves collecting GH samples every 20 minutes for 12 hours from 8 PM to 8 AM, with a lack of nadir below 1.0 ng/mL considered consistent with GH excess. 5In patients with craniofacial FD it is prudent to have a low threshold for initiating treatment, as uncontrolled GH excess is associated with increased craniofacial morbidity. 6If no clinical or biochemical evidence of GH excess is evident by age 5 years, MAS-associated GH excess is effectively ruled out.

**References**


**Legend**

FD = fibrous dysplasia; GH = growth hormone; IGF-1 = insulin-like growth factor-1; MAS = McCune-Albright syndrome; mo = months; OGTT = oral glucose tolerance test; PP = precocious puberty; PRL = prolactin; q = each; TRP = tubular reabsorption of phosphate; TSH = thyroid stimulating hormone