Gonadal Evaluation in Girls

1. Targeted H&P
2. Review growth curve
3. Bone age

History of breast development, vaginal bleeding and/or signs of estrogenization below age 6-7 years:
- High sensitivity LH, FSH and estradiol
- Pelvic US
- Ovarian cyst +/- abnormal labs
- Normal US +/- abnormal labs

Possible MAS-associated PP
- Surgical cyst removal is contraindicated

Likely MAS-associated PP
- Surgical cyst removal is contraindicated

No history of breast development, vaginal bleeding and/or signs of estrogenization below age 6-7 years:
- No bone age advancement
- Bone age advancement ≥2 years
- MAS-associated PP unlikely
- Consider subclinical PP
- Consider hyperthyroidism and/or GH excess

From Boyce & Collins [2012]

1To be performed at initial presentation in all girls suspected of having MAS, regardless of clinical symptoms. 2Gonadotropins should be suppressed in MAS-associated PP, unless autonomous estrogen production has induced central PP (typically occurs when bone age reaches approximately 11 years). 3Estrogen production in MAS-associated PP is intermittent, and undetectable levels do not rule out disease. 4Ovarian cysts are suggestive of MAS-associated PP, however absence of cysts does not rule out disease. 5In girls presenting with isolated peripheral PP, the differential also includes estrogen-producing tumors. Work-up for additional features of MAS may establish the diagnosis. 6Unlike other features of MAS, autonomous ovarian activity may present at any time during infancy or childhood. Girls should continue to be monitored clinically for signs of peripheral PP, however routine labwork and imaging is not recommended. 7Patients may rarely present with intermittent ovarian activity with only subtle signs of estrogenization (mild intermittent breast development without vaginal bleeding), which may not be appreciated by families and practitioners. 8Hyperthyroidism and GH excess may present with bone age advancement.

References

Legend
SH = follicle stimulating hormone; GH = growth hormone; H&P = history & physical exam; MAS = McCune-Albright syndrome; PP = precocious puberty; US = ultrasound