The Tales From Down Under:
Discussing the Myths and Mysteries of Pediatric & Adolescent Gynecology

Akilah Weber, MD
Pediatric & Adolescent Gynecology
An 18 month old comes to see you with 30% adhesion of posterior labia minora. She has used estrogen cream bid x 2 weeks with no improvement and now complains of darkening of skin of her vulva. What should you recommend?

1. Continue with estrogen for 2 more weeks
2. Stop all medication and observe
3. Refer for surgical management
4. Stop the estrogen and start betamethasone cream
An 18 month old comes to see you with 30% adhesion of posterior labia minora. She has used estrogen cream bid x 2 weeks with no improvement and now complains of darkening of skin of her vulva. What should you recommend?

A. Continue with estrogen for 2 more weeks  
B. Stop all medication and observe  
C. Refer for surgical management  
D. Stop the estrogen and start betamethasone cream
LABIAL ADHESIONS

- Most commonly occur between ages 3 month – 6 years of age
  - Peak incidence 13 months – 23 months

- Incidence 0.6-5% of pre-pubertal girls
  - May affect up to 38.9%

- Unknown etiology
  - Hypoestrogenic state
  - Chronic irritation

LABIAL ADHESIONS

Treatment

• Based of symptoms or severity of adhesions
• Prepubertal spontaneous resolution reported to occur
• Estrogen cream usually first line
  – Success rate 50%-88%
  – ~50% of successful treatment will occur within 2 weeks
  – Use of Premarin cream for up to 4 weeks is safe
  – Side effects with long term treatment
    • Can occur within first 2 weeks

Betamethasone 0.05%
• Treatment for phimosis
• Shown efficacy for labial adhesions
• Twice a day for up to 12 weeks
• Side effects minimal
Betamethasone Retrospective Study

19 subjects
14/19 previously treated with E2
3/19 previously had surgical lysis

68% success rate
- 1/19 partial success
- 2/19 chose surgical intervention
- 3/19 loss to follow up

No significant side effects

LABIAL ADHESIONS

Retrospective Study

- 151 patients with labial adhesions

- Betamethasone resolved adhesions quicker
  - Premarin 2.2 months vs. Betamethasone 1.3 months

- Betamethasone had lower rates of refractory to therapy
  - Premarin 27.4% vs. Betamethasone 15.8%

- Betamethasone had lower rates of recurrence
  - Premarin 35% vs. Surgery 26% vs. Betamethasone 15.8%

LABIAL ADHESIONS

• Manual Separation
  – Thicker adhesions (3-4 mm in width)
  – Recurrence reported (39%) within 4 months – 2 years
• Surgical lysis rarely indicated
  – Recurrence reported
  – Less likely to respond to medical therapy in future

MYTH #1 – Estrogen cream can only be used for up to 2 weeks

MYTH #2 – Surgical intervention is a good first line treatment option

MYTH #3 – Estrogen cream is the only medical therapy available for treatment

MYTH #4 – Parents know how to apply the cream correctly
CASE #2

A 6 year old comes in for evaluation of recurrent yeast infections. She complains of vaginal discharge and has been treated for yeast 3 times in the last 3 months. What do you do?

1. Treat for yeast infection with the same medication
2. Treat for a possible UTI
3. Do a vaginal culture
4. Prescribe a different antifungal than used before
A 6 year old comes in for evaluation of recurrent yeast infections. She complains of vaginal discharge and has been treated for yeast 3 times in the last 3 months.

What do you do?

A. Treat for yeast infection with the same medication
B. Treat for a possible UTI
C. Do a vaginal culture
D. Prescribe a different antifungal than used before
Inflammation of vulva and/or vaginal tissues
Most common gynecologic problem in prepubertal girls
- Between ages of 2 and 7 years of age
Typical complaint – vaginal discharge, vaginal itching or vulvar redness
Most cases are non-specific vulvovaginitis (up to 75%)
- Main causative agents: Strep B hemolytic group (S. pyogenes) and H. influenzae

Fischer G. Chronic vulvitis in pre-pubertal girls. Australasian Journal of Dermatology. 2010; 51:118-123
VULVOVAGINITIS

Risk Factors

• Anatomy
  - Lack of labial fat pads and pubic hair
  - Thin, sensitive vulvar skin
  - Thin vaginal epithelium
  - Low in glycogen
  - Neutral vaginal pH → good bacterial culture medium
  - Non-production of cervical mucus
  - Proximity of vulva to anal region

• Hygiene
  - Poor hand washing
  - Improper cleansing of vulvar and rectal areas
  - Auto-inoculation of bacterial from upper airways
  - Exposure to vulvar irritants

• Foreign body
VULVOVAGINITIS

• Sample of discharge should be collected
  – Distinguish between non-infectious and infectious causes (specific pathogen)
• Vaginal irrigation

Treatment
• Improved hygiene
• Sitz baths
• Avoid vulvar irritants
• Loose fitting clothing
• Antibiotics for growth of specific organism
115 girls, ages 2-8 years of age
Vaginal cultures taken
38 of the 115 had a positive culture (33%)
  – 21 Group B Strep
  – 5 H. influenzae
  – 3 E. coli
  – 2 Enterococcus species
  – 1 Staph aureus
  – 1 Proteus mirabilis
  – 1 Strep pneumo

Genital candidiasis

• Conditions which favor vulvovaginal candidiasis:
  – Antibiotic therapy
  – High estrogen levels
  – Impairment in immunity

Cultures taken from 379 symptomatic girls between 0-12 years of age

- 22 tested positive for Candida species (6%)
  - 12 were inpatients (28.6%)
  - 3 outpatient/day ward patients (2.8%)
  - 7 general practice (3%)

Combined < 1% of specimens submitted by outpatient and general practice were positive for Candida

Myth #1 – All cases of vulvovaginitis should be treated with medication

Myth #2 – Candida is a common cause of vulvovaginitis in the prepubertal girl

“My daughter wants everything she sees advertised on TV. Yesterday she asked me to buy her a yeast infection.”
A 10 year old has an abdominal/pelvic MRI to evaluate abdominal pain. The radiologist notes that she has polycystic appearing ovaries. On exam she is Tanner I Breast and Tanner I GU.

What do you do?

1. Order an ultrasounds
2. Order hormonal labs
3. Nothing
4. Refer to ped gyn and/or ped endo
A 10 year old has an abdominal/pelvic MRI to evaluate abdominal pain. The radiologist notes that she has polycystic appearing ovaries. On exam she is Tanner I Breast and Tanner I GU. What do you do?

A. Order an ultrasound
B. Order hormonal labs
C. Nothing
D. Refer to ped gyn and/or ped endo
Hyperandrogenism and chronic anovulation

- Excluding other endocrinopathies (ex virilizing tumors, nonclassical CAH, hyperprolactinemia, Cushings syndrome)

- 1990 National Institute of Health and Human Development Conference on PCOS
POLYCYSTIC OVARIAN SYNDROME

2003 Revised Rotterdam Consensus
(2 out of 3 parameters)

1. Clinical/biochemical hyperandrogenism
2. Oligo-or anovulation
3. Polycystic ovaries on sono

Excluding other endocrinopathies
MENSTRUAL IRREGULARITY
- As many as 85% of cycles the first year are anovulatory and up to 59% have been shown to be anovulatory at year 3

HYPERANDROGENISM
- Acne is common during adolescent years
- Hirsutism is a better marker

ULTRASOUND
- Only 40% of girls with anovulatory bleeding had PCO on sono
- In adolescents with normal menses PCO are often found on sono
- Also suggested that maximum ovarian size occurs up to 4 years after menarche

DIAGNOSIS RECOMMENDATIONS IN ADOLESCENTS:

- All 3 elements of the Rotterdam criteria should exist
- Biochemical hyperandrogenism should be used
- Oligo-amenorrhea should exist for at least two years
- Polycystic ovaries should include increased ovarian size (>10 cm³)

Myth #1 – PCOS can be diagnosed by imaging studies alone

Myth #2 – It is important to diagnose PCOS as soon as possible
Thank You!

Akilah Weber, MD
858-966-7484
aweber@rchsd.org