The ABC’s of Pediatric and Adolescent GYN for the Generalist”

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Conflict of Interest

• I do not have any

Objectives

1. Describe the most common pathology encountered by a Pediatric gynecologist that a generalist can encounter
2. Visualize and comprehend examples of these pathologies
3. Differentiate the management strategies of these pathologies
Amenorrhea

Definition:
No menses by age 16
(There is a 2 year interval between thelarche and menarche)
No menses 2 years after thelarche
No menses by age 14 if no thelarche

Menstruation is dependent on:

- CNS
Amenorrhea

Menstruation is dependent on:

- CNS
- Ovarian response

Amenorrhea

Menstruation is dependent on:

- CNS
- Ovarian response
- Normal uterus/ cervix/ vagina

Amenorrhea

Indicates lack of estrogen

Causes:
CNS failure
Gonadal Failure
Amenorrhea

Breasts Present

Breast development indicates estrogen production

Uterus Absent

Uterine absence indicates congenital absence or androgen insensitivity

Amenorrhea

Management

- First, rule out pregnancy
- Look for change in CNS
  - Thyroid problem/ prolactin increase
  - Check FSH, TSH, Prolactin
- Remember that teens should have menarche within 2 years of thelarche—if don’t refer for evaluation
**Breast Issues**

Breast asymmetry:
- Common
- May first be noted with asymmetric thelarche
- Rule out mass and observe

Breast mass:
- Most commonly fibroadenomas/ fibrocystic areas
- Primary cancer is rare (<1% cases)
- Malignancies-mets from non-breast origin

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**Breast Imaging**

**Ultrasound**
- Most useful
- Solid vs. cystic

**Mammography**
- Not indicated
- Breast too dense

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**First 12 months after Adolescents begin Intercourse**

Percentage of all first teen pregnancies
- 22%
- 50%
- 81%

Mean interval 9-23 months

USUALLY SEEK CONTRACEPTION

↓
1 2 3 4 5 6 7 8 9 10 11 12
↑
Some Reasons Why Adolescents Have Sex

- "I feel like the only virgin in my group of friends"
- "I just want to get it over with"
- "My partner will break up with me if I don't have sex"
- "Having sex will make me popular"
- "I'll feel more mature if I have sex"
- "I want to get back at my parents"

Teen Pregnancy Time Clock

- 1 out of 35 teenage girls (13-17) gets pregnant
- 1 out of 42 teenage girls (ages 13-17) gives birth
- Every 8 hours a 14 year-old girl gets pregnant
- Every 3 hours a 15-year-old girl gets pregnant
- Every 1.2 hours a 16-year-old girl gets pregnant
- Every 45 minutes a 17-year-old girl gets pregnant

Depot Medroxy Progesterone acetate (DMPA)

- No interaction with anticonvulsants or sickle cell disease
- Good alternative in poorly complaint
- Better compliance (72% one year)
- 60% amenorrhea at 12 mo, 70% at 24 mo
- Conception at 12 mo is 70% (94% OCs)
- No effect on breast cancer, VTE or liver disease/adenomas
- Subcutaneous Depo as effective as intramuscular
DMPA and BMD

• Up to 90% of the total adult bone content is acquired at the end of the teenage years
• Reports in adults and adolescents have shown a decrease in bone mineral density (BMD) in those who use DMPA
• BMD improves after discontinuation in adolescents.
• Time to remove the warning??????

Emergency Contraception

• Use of EC decreases risk of pregnancy from 8% to 1-2% after single episode of unprotected coitus
• Can be taken up to 5 days after unprotected intercourse
• Consider an advance prescription but available over the counter for 13 and up
• Better effectiveness if used within 72 hr (89%)
Gynecologic Examination

• Neonate
  • Maternal estrogenization
  • Plump/ full labia majora
  • Mucous vaginal discharge
  • Thick pale pink hymenal tissue
  • Signs of estrogenization diminishes after 2-3 weeks

Gynecologic Examination

• Prepubertal girls
  • Dorsolithotomy position
Gynecologic Examination

- Prepubertal girls
  - Frog leg

- Prepubertal girls
  - Knee chest position

- Prepubertal girls:
  - Visualizing the vestibule
  - Labial separation
  - Labial traction
Gynecologic Examination

Prepubertal girls
Assess:
- Presence of pubic hair (Tanner Stage)
- Clitoral size (abnormal if glans > 5 mm)
- Hymenal shape/ configuration
- Signs of estrogenization
- Presence/ absence of vaginal discharge
- Perianal hygiene

Gynecologic Examination

Prepubertal girls: Documentation
Gynecologic
Examination

Prepubertal girls:
Documentation
Use clock-face
technique

Hymenal
Anatomy

Hymenal
Anatomy
**Imperforate Hymen**

Neonate
- Assess obstruction with rectal/US
- Could open with cautery in nursery but rather not

Newborn
- Usually subsides in 1 month
- Correct at puberty

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**Imperforate Hymen**

- Adolescent
  - Usually present with pain/amenorrhea
  - Isolated anomaly
  - 20% present with acute urinary retention
  - Rule out transverse vaginal septum with Ultrasound/MRI prn

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**Journal of Pediatric and Adolescent Gynecology**
www.jpagonline.com
Karyotype

Two indications

• Menstrual abnormalities with FSH elevation
  Rule out gonadal dysgenesis (eg., Turner Syndrome or mosaic)
  Short stature girls < 5%

• Girls with absent uterus
  Rule out presence of Y chromosome

Labial Adhesions

• Usually asymptomatic
• Peak incidence 13-23 months
• Typically resolves at puberty
• No treatment unless
  • Frequent UTI
  • Difficulty with urination
  • Persistence into puberty
MENSTRUAL CYCLES IN ADOLESCENTS

- First Gynecologic Year
  - 5% ile = 23 days
  - 95% ile = 90 days
- Fourth Gynecologic Year
  - 95% ile = 50 days
- Seventh Gynecologic Year
  - 5% ile = 27 days
  - 95% ile = 38 days
- Cycle length more VARIABLE for teens than women 20-40


Menstruation: What’s Normal

- Most cycles 21-~45 days even in the first gynecologic year
- Menarche 12.43 years of age
- Cycles that are consistently outside this range are statistically uncommon; i.e. it’s not true that “Anything goes” for cycle length
- Evaluate for specific causes of amenorrhea in girls with cycles > 90 days

Grimes DA, 1977

Menstruation: Practical Points

- Educate Moms and Daughters about what is normal:
  - 21-45 days (how to count)
  - <= 7 days of flow
  - 3-6 pads/day is typical
  - Variation in pad/tampon capacity
  - Grimes DA, 1977
  - WRITE IT DOWN!
  - Report cycles outside of these norms to primary clinician
There is an App for that

North American Society for Pediatric and Adolescent Gynecology

www.naspag.org

• 2016 Annual Clinical and Research Meeting
• Fairmont Hotel, Toronto Ontario
• April 7-9, 2016
Ovarian Cysts

- Consequence of normal follicular growth and development
- Low incidence of complications including malignancy
- Majority resolve in 6 months without treatment

Ovarian Cysts Neonatal

- Usually unilateral
- Can be simple or complex
- Complex usually represent in utero torsion or hemorrhage
- Both simple/complex cysts regress within 1st 4 months of life
- Observe < 5 cm/Aspirate > 5 cm
- Malignancy rare under the age of 2

Ovarian Cysts Childhood

- 35% incidence simple cysts in girls ages 2 – 9 years
- Can be associated with precocious puberty
- Most simple/complex masses resolve even when > 5 cm
- Those without resolution:
  - Usually mature cystic teratomas
  - Malignancy possible (most commonly germ cell)
Ovarian Cysts
Adolescent

Small cysts rare cause of pain
Low rate of malignancy
  Suspect with multiloculated lesions
  or with solid components
Size < 8 cm less likely for torsion—
  Observe
Size > 8 cm – surgical intervention

Pap Testing

- Age 21
- Every 3 years after that
- If some one Pap them then…
- No HPV testing to screen
- HPV Vaccine!!!!!!!!!!!!!
Sexually Transmitted Diseases

- Chlamydia and gonorrhea rates are highest in the adolescent population
- The most common STD is human papillomavirus (HPV)
- Sexually active women should be screened at least annually and preferably with each new sexual partner
- New onset BTB in menstruating teens may be Chlamydia
- Consider urine screening
Urethral Prolapse

Vaginal Bleeding in Pediatric Patient
- Most common causes
  - Foreign body
  - Urethral prolapse
  - Group A beta-hemolytic strep
  - Shigella
  - Trauma
- Rare
  - Precocious puberty

Vulvovaginitis
- Most common gyn complain in prepubertal girl
- C/O discharge, dysuria, vulvar redness
- Usually “non-specific”
- Infectious cause
  - Have visible discharge/ vulvar erythema
- Most respond to hygienic measures
- Candida is rare outside the diaper period
Vulvovaginitis

• Historical clues
  • Sx for months/ years
    • Likely non-specific
  • Short duration symptoms
    • Likely specific pathogen
• Color of discharge
  • Bloody: foreign body, etc.
  • Green: Staph, Strep, H. flu
• Odor
  • Foul-smelling-foreign body

Vulvovaginitis

• Supportive treatment
  • Improved hygiene
  • White cotton underpants
  • Front-to-back wiping
  • Avoid irritants
  • Sitz bath in warm tap water
  • Avoid soap to vulva
  • Pat vulva dry or air dry
  • Apply protective barrier cream to vulva
    • (e.g., Desitin, A and D ointment)

Vulvovaginitis

If no response to supportive treatment in 7-14 days:

Re-examine patient
Exclude pinworms
Empiric treatment with
  • Amoxicillin
  • Amoxicillin clavulanate
Do not fall a sleep!

Zebra: uncommon cases should be referred to a sub specialist

References

- ACOG Committee Opinions: 696, 692, 598, 586, 539 and 349.