Menstrual Disorders in Adolescence

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Jane

Jane, a 15 3/12 year-old girl, visits you for a WCC. Her last check-up was at 12 yo. Jane has always been mildly overweight. She reports that she has not had a menstrual period for 6 months. Menarche occurred at age 12 1/2. She recently saw a cosmetologist for facial hair removal.
Tamisha is here today for menstrual cramps. She started menarche at age 12, every 28 days, lasting 5-7 days. Cramps the week before, daily. Increased pain with walking. Stays in bed. Some school absences. During period, headache/malaise, but worst is cramping/back pain.
Sonia comes in complaining of menses for 4 weeks. Her first period was 8 months ago and intervals have been irregular with menses lasting 5-7 days.

Mother reports she tires easily and appears pale.
Menstrual Disorders

- Amenorrhea
- Abnormal Vaginal Bleeding
- Dysmenorrhea
Amenorrhea

Differential Diagnosis
- Pregnancy
- Hormonal Contraception
- Hypothalamic Causes
- Pituitary Causes
- Ovarian Causes
- Outflow tract related
- Androgen excess
Amenorrhea Algorithm

1. History and normal PE
2. Urine Pregnancy test
   - Positive Pregnant
   - TSH, Prolactin
   - Progestational challenge
   - Hyper/hypo thyroidism, Hyperprolactinemia
   - LH/FSH/testosterone
     - Increased LH
     - Decreased FSH
     - Increased Testosterone
     - PCOD
     - Decreased FSH/LH
       - normal testosterone
       - Hypothalamic amenorrhea (eating disorder, Female athletic triad)
     - Increased LH/FSH
       - normal testosterone
       - Ovarian Failure
Hypothalamic causes

- Chronic or systemic illness
- Stress
- Athletics
- Eating Disorder
- Obesity
- Drugs
- Tumor
Pituitary Causes

- Hypopituitarism
- Tumor
- Infiltration
- Infarction
Ovarian causes

- Dysgenesis
- Agenesis
- Ovarian failure
- Resistant ovary
Outflow tract related

- Imperforate hymen
- Transverse vaginal septum
- Agenesis of the vagina, cervix, uterus
- Uterine synechiae
Androgen excess

- Chronic anovulatory hyperandrogenism (PCO)
- Adrenal tumor
- Adrenal hyperplasia (classic and nonclassic)
- Ovarian Tumor
Abnormal Vaginal Bleeding

- Pregnancy Related
- Hormonal contraception
- Anovulation
- Outflow tract related
- Endocrine causes
- Hematological causes
- Infections
Pregnancy Complications

- Ectopic pregnancy
- Abortion
Hormonal Contraception

- Oral Contraceptives
- Long acting Progestins
Anovulatory

- Immature hypothalamic-pituitary-ovarian axis
- PCOD
Outflow tract related

- Trauma
- Foreign body/IUD
- Vaginal tumor
- Cervical carcinoma
- Polyp
- Uterine myoma
- Uterine carcinoma

12/6/2004
Other endocrine causes

- Thyroid disease
- Adrenal disease
Blood Dyscrasias

- Thrombocytopenia
- Abnormalities of clotting factors
- Abnormalities of platelet factors
- Anticoagulant medications
Infections

- Pelvic inflammatory disease
- Cervicitis
Dysfunctional Uterine Bleeding

**Evaluation**

- History and Physical
  - Vital Signs (orthostatic changes)
  - Pelvic examination
Dysfunctional Uterine Bleeding

- Mild
- Moderate
- Severe
Outpatient Regimen for Treatment of Abnormal Vaginal Bleeding with Oral Contraceptives

- One pill QID x 4 days
- One pill TID x 3 days
- One pill BID x 7 days
- One pill QD x 7-14 days*
- Stop all pills for 7 days and then begin cycling on low dose OCP

*length of therapy depends on level of anemia and amount of time required to reach an adequate hemoglobin level for resumption of menstruation
Initial 3-4 weeks of therapy should be with a monophasic 35 to 50 mcg estrogen containing OC. Monophasic or triphasic OC can be used for cycling once bleeding is controlled.
Dysmenorrhea

- 60% 12 - 17 yo girls
- Crampy lower abdominal pain with similar regular recurrence within the menstrual cycle
- Primary
- Secondary
Primary Dysmenorrhea

- Ovulatory cycles
- First 2 - 3 days of menses
- Positive family history
Secondary Dysmenorrhea

- Infection
- Pregnancy related
- Endometriosis
Medications used to treat Dysmenorrhea

**Propionic Acid Group:**
- Ibuprofen 400-600 mg Q 4-6 H
- Naproxen Sodium 500 mg load, then 275 mg Q 8-12 H
- Naproxen 550 mg load, then Q 12 H

**Fenamate Group:**
- Mefenamic acid 500 mg loading dose, then 250 mg Q 6 H
Jane

Jane, a 15 3/12 year-old girl, visits you for a WCC. Her last check-up was at 12yo. Jane has always been mildly overweight. She reports that she has not had a menstrual period for 6 months.
Jane

Menarche occurred at age 12 1/2. She recently saw a cosmetologist for facial hair removal. On physical examination: Height 155.3 cm (10-25th percentile), Weight 83 kg (95th percentile), which represented an 8-kg weight gain over the last year, and that she had excess dark, curly facial hair in the sideburn area and chin.

What's your diagnosis and plan?
Tamisha

Tamisha is here today for menstrual cramps. She started menarche at age 12, every 28 days, lasting 5-7 days. Cramps the week before, daily. Increased pain with walking. Stays in bed. Some school absences. During period, headache/malaise, but worst is cramping/back pain.
Tamisha

- **Past medical hx:** h/o exercise induced asthma and allergic rhinitis.
- **ROS:** Unremarkable. Mother had bad menstrual cramps. Not sexually active.
- **Medications:** Zyrtec, Albuterol MDI PRN
- **LMP:** Last Friday of this month
- **PE unremarkable, no pelvic done.**
Sonia comes in complaining of menses for 4 weeks. Her first period was 8 months ago and intervals have been irregular with menses lasting 5-7 days.

Mother reports she tires easily and appears pale.
Sonia

PMH: unremarkable
PSH: T and A at 5 years
FH: Mother had heavy periods, nothing like this
ROS: Fatigue, pallor, no bruising, increasing clots and cramps
Meds: none     HEADSS: no sex!
Sonia

- Pale P 120 BP 110/70 no orthostatic changes
- PE: unremarkable except for pallor
Sonia

- Labs: Hgb 10
- HCG negative