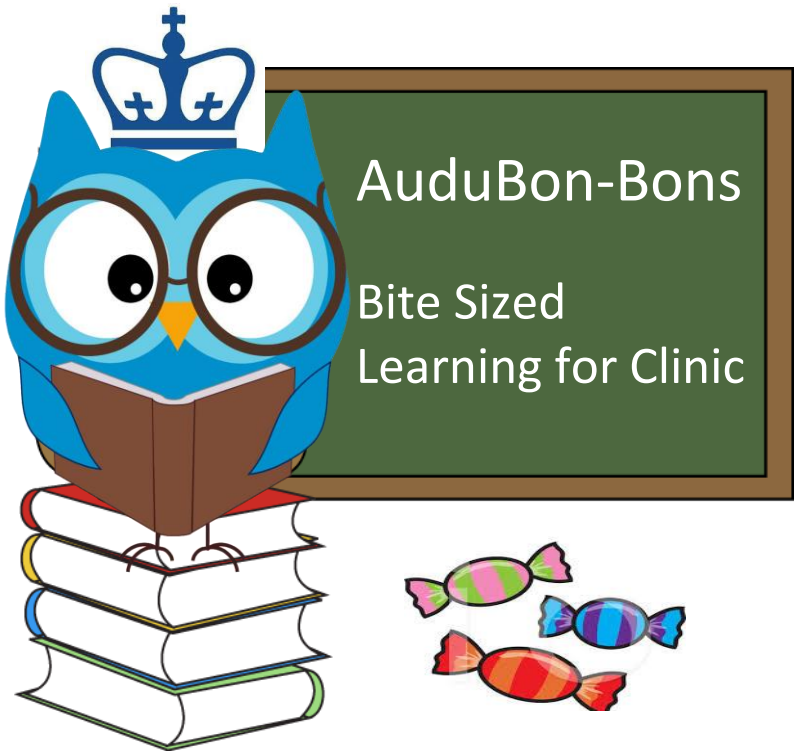
DYSMENORRHEA



Week 84

Prepared by: **Devon Rupley, MD**

Reading Assignment:

ACOG Committee Opinion No. 760: Dysmenorrhea and Endometriosis in the Adolescent

LEARNING OBJECTIVES 

- Define primary and secondary dysmenorrhea
- Understand the pathophysiology of primary dysmenorrhea
- Review common treatments for dysmenorrhea

CASE VIGNETTE

- A 14 yo P0 young woman presents for evaluation of painful periods. She underwent menarche 10 months ago. Her mother reports that over the past 3 months, she has been unable to go to school during her menses due to severe pain. Cycles occur every 3-4 weeks, and last 4-5 days with moderate bleeding, but significant pain the first 3 days of cycle accompanied by nausea and occasional vomiting. She feels well outside of her menses, and is otherwise healthy. Her LMP was 2 weeks ago.

FOCUSED HISTORY

- PMH: Mild intermittent asthma
- PSH: None
- OBH: None
- GYNH: Menarche 10 months ago at age 13, menses last 4-5 days with moderate bleeding, never sexually active, no cysts, fibroids
- FH: Father with HTN
- SH: 8th grade, no behavioral issues, lives with mother and 4 year-old sister, denies tob/etoh/ drug use
- Meds: Albuterol PRN
- All: PNC- hives

PERTINENT PHYSICAL EXAM FINDINGS

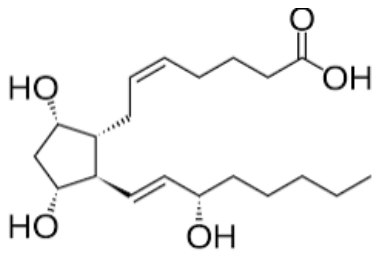
- VS: Wt 44 kg, Ht 158 cm, BP 90/62, P 82, T 37.0
  - Gen: NAD
  - HEENT: WNL
  - Chest: CTAB
  - CVS: RRR
  - Breast: Bilateral breast tissue enlargement with secondary areola mound, consistent with Tanner Stage IV
  - Abd: Soft, non-tender, no masses
  - Ext Pelvic: Normal appearing external genitalia, Tanner Stage IV
  - Ext: WWP

DYSMENORRHEA

- The presence of recurrent, crampy, lower abdominal pain occurring during menses
- Most common menstrual symptom among adolescent girls, with prevalence rate of 50-90%
- Leading cause of recurrent short-term school absenteeism
  - 12% of girls age 14-20 report lost school or work days each month due to dysmenorrhea

DYSMENORRHEA

- Primary Dysmenorrhea:
  - Painful menstruation in absence of pelvic pathology
  - Begins when adolescents attain ovulatory cycles usually within 6-12 months of menarche
  - Related to pro-inflammatory mediators, prostaglandins and leukotrienes



https://en.wikipedia.org/wiki/Prostaglandin_F2alpha

- Secondary Dysmenorrhea:
  - Painful menstruation due to pelvic pathology or recognized medical condition
  - Most common cause is endometriosis
  - Other causes:
    - Adenomyosis
    - Infection/ PID
    - Myomas
    - Mullerian anomalies
    - Obstructive reproductive tract anomalies
    - Ovarian cysts

RISK FACTORS

- What are the risk factors for dysmenorrhea?
  - Heavy menstrual bleeding- 4.7 odds ratio
  - Irregular menses- 2.0 odds ratio
  - Age <30 – 1.9 odds ratio
  - Sexual abuse -1.6 odds ratio
  - Menarche before age 12 – 1.5 odds ratio
  - Low body mass index – 1.4 odds ratio
  - Sterilization- 1.4 odds ratio
  - Smoking
- Protective factors?
  - Younger age at first childbirth
  - Use of hormonal contraceptives
  - Higher parity

AMERICAN FAMILY PHYSICIAN®

https://www.aafp.org/afp/2014/0301/p341.html#afp20140301p341-b6

EVALUATION FOR PRIMARY DYSMENORRHEA

- What exams/ tests do you start with?
  - History
    - Menstrual
    - Timing and quality of pain
    - Associated symptoms
    - Sexual history
    - Prior treatments
  - No need for internal exam unless patient is sexually active and concerned for infection or concerned for secondary dysmenorrhea
  - No imaging or labs needed

WHAT TREATMENT WILL YOU RECOMMEND?

- NSAIDs
  - Interrupt cyclooxygenase-mediated prostaglandin production
  - Most effective if started 1 day before menses and continued through first 2-3 days
- What are NSAID options?

Table 1. Nonsteroidal Antiinflammatory Drugs Used During Menstruation in the Treatment of Primary Dysmenorrhea in Adolescents and Young Adults

Drug	Dosage
Ibuprofen	800 mg initially, followed by 400–800 mg every 8 hours as needed
Naproxen sodium	440–550 mg initially, followed by 220–550 mg every 12 hours as needed
Mefenamic acid	500 mg initially, followed by 250 mg every 6 hours as needed
Celecoxib*†	400 mg initially, followed by 200 mg every 12 hours as needed

*For females older than 18 years

†Cyclooxygenase-2 specific inhibitor

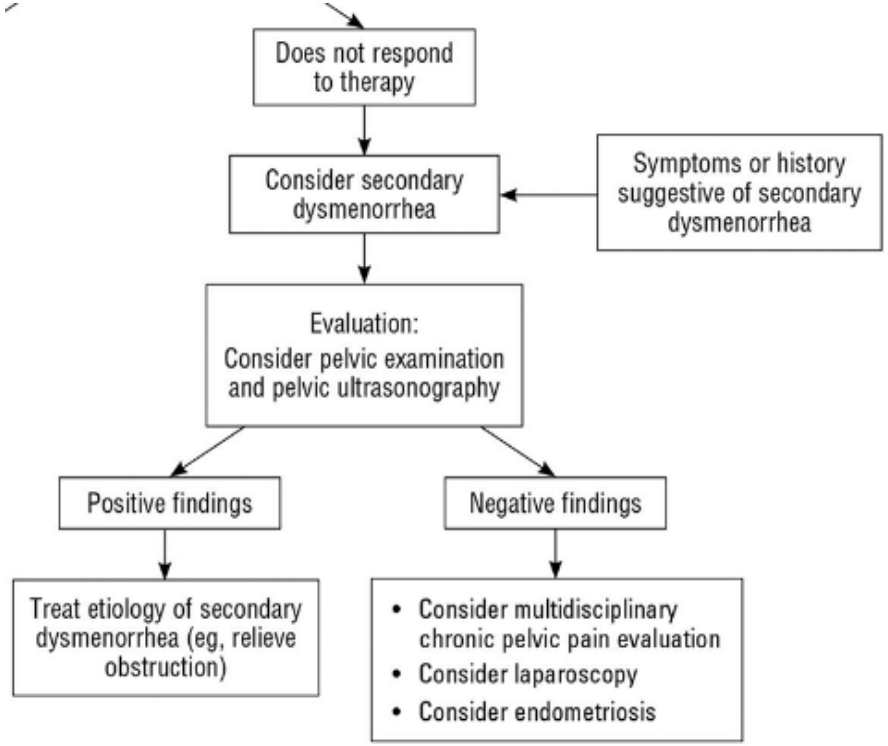
Reprinted from Harel Z. Dysmenorrhea in adolescents and young adults: an update on pharmacological treatments and management strategies. Expert Opin Pharmacother 2012;13:2157–70.

HORMONAL TREATMENT OPTIONS

- What other options can be added?
  - Combined oral contraceptives
  - Vaginal ring or patch
  - IM medroxyprogesterone
  - Implant
  - LNG-IUS
- Mechanism of action likely related to prevention of endometrial proliferation and or ovulation decreased prostaglandin and leukotriene production
- Can opt for continuous regimens or cyclical depending on patient preference
- Alternative therapies:
  - Exercise and heat therapy
  - Acupuncture

NEXT STEPS…

- Trial NSAIDS +/- hormonal agents for 2-3 months and reassess symptoms
- If persistent or worsening, initiate work-up for secondary dysmenorrhea



https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2018/12/dysmenorrhea-and-endometriosis-in-the-adolescent

SOCIAL DETERMINANTS OF HEALTH

- Race/ethnicity does not appear to be associated with primary dysmenorrhea
- White race is seen as a risk factor for endometriosis, the leading cause of secondary dysmenorrhea
  - Possibly due to lower rates of diagnosis of endometriosis among black patients
- One study found that “lower number of formal years of education of mother” was associated with dysmenorrhea
- In some studies, higher income is associated with increased likelihood of severe dysmenorrhea
- No other sociodemographic data point (race, ethnicity, geographic area) has been consistently associated with rates or treatment for dysmenorrhea

EPIC .Phrase

.BBDysmenorrhea

Description: Dysmenorrhea management counseling

We discussed treatment for primary dysmenorrhea including trial of NSAIDS, and/or hormonal modalities with plan for re-evaluation of symptoms in 2-3 months. We also discussed possible supplemental therapies including heat, exercise, yoga, and acupuncture for symptom relief.

BILLING AND CODING

- N94.6- Dysmenorrhea, unspecified
- N94.4- Primary dysmenorrhea

EVIDENCE

- ACOG Committee Opinion 760. Dysmenorrhea and Endometriosis in the Adolescent. *Obstet Gynecol* 2018;132:p1517-1518.
- Osayande, A. Diagnosis and initial management of dysmenorrhea. *Am Fam Physician.* 2014 Mar 1;89(5):341-346.
- Smith RP, Kaunitz AM. Dysmenorrhea in adult women: clinical features and diagnosis. *UpToDate.* 2020. Accessed online on June 30, at ttps://www.uptodate.com/contents/dysmenorrhea-in-adult-women-clinical-features-and-diagnosis?csi=0cd32203-726f-4bc3-9907-f47e90263ed8&source=contentShare
- Ju H, Jones M, Mishra G. The prevalence and risk factors for dysmenorrhea. *Epi Reviews.* 2014: 36 (1):104-113.