

*433 Teams*

# **OBSTETRICS & GYNECOLOGY**

## **46: Dysmenorrhea**

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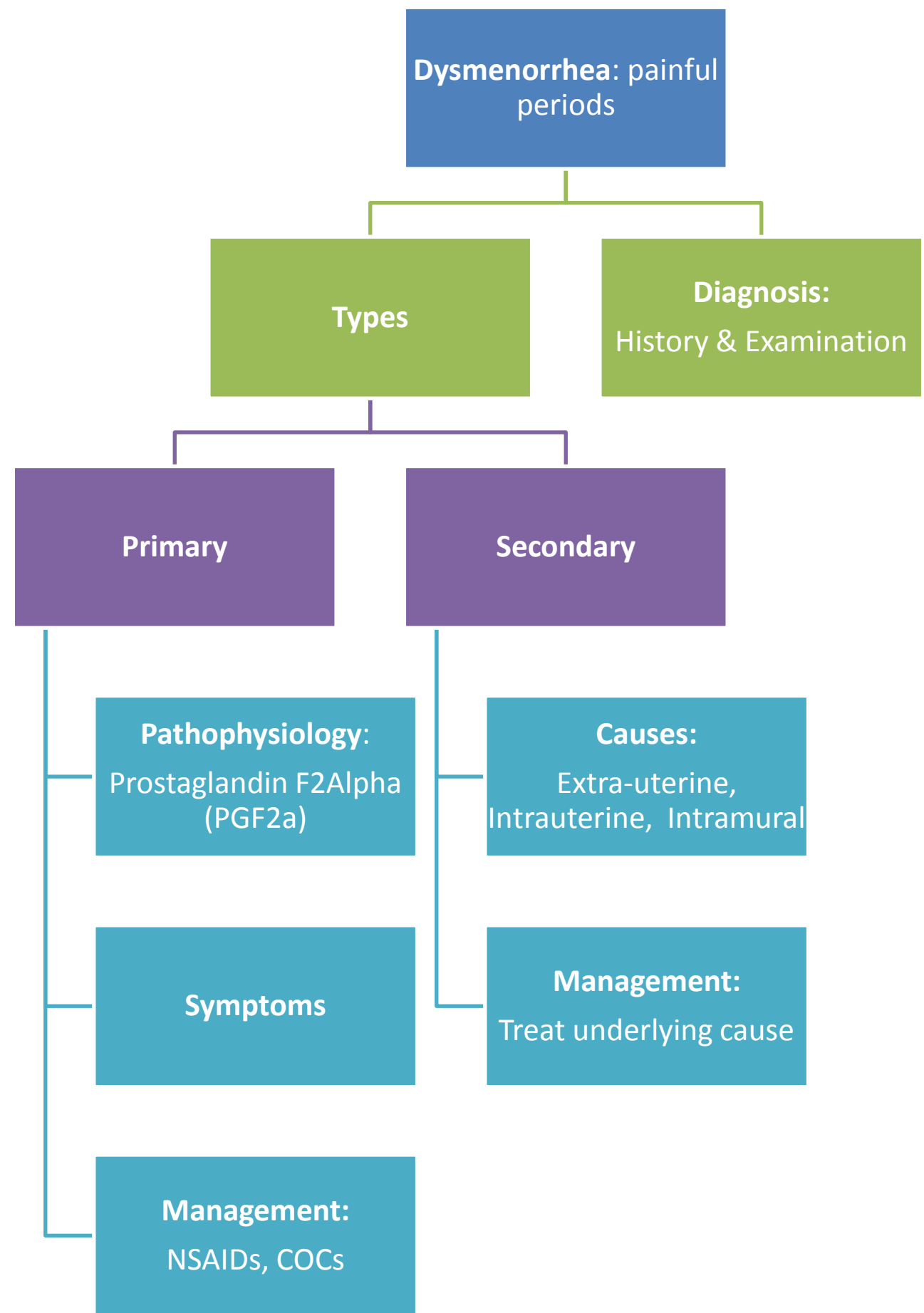


# Objectives

- **Define dysmenorrhea and distinguish primary from secondary dysmenorrhea**
- **Describe the pathophysiology and identify the etiology**
- **Discuss the steps in the evaluation and management options**

# Dysmenorrhea

- **Definition:** painful menstruation
- **Incidence:** late teens to early 20's
- **Etiology:** no clinically identifiable cause



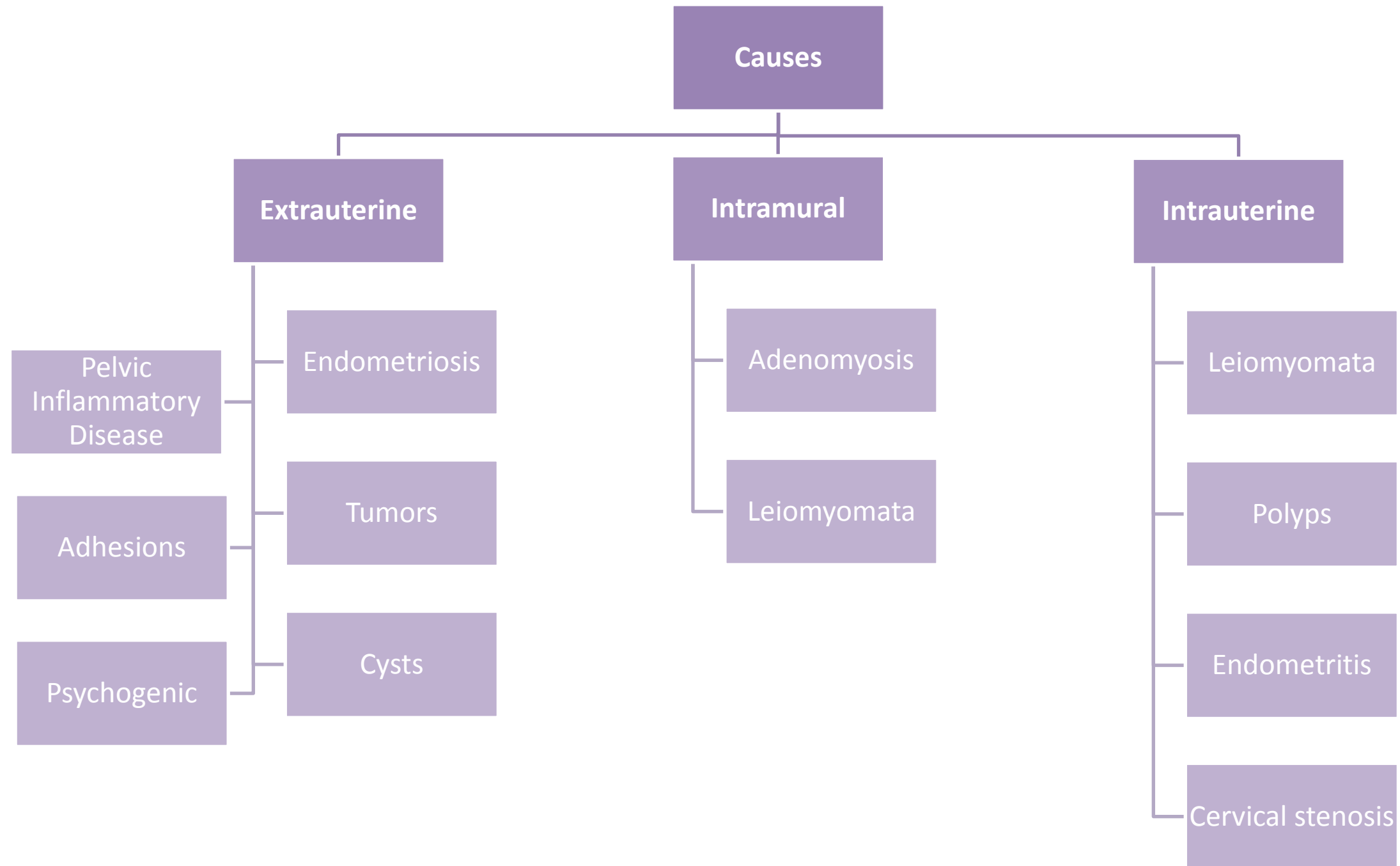
# Primary Dysmenorrhea Pathophysiology



# Primary Dysmenorrhea Pain

<b>Site</b>	lower abdomen, back, or thighs
<b>Onset</b>	1-2 before, or when menstruation starts
<b>Characteristic</b>	ache
<b>Severity</b>	mild to severe (prevent from normal activities)
<b>Duration</b>	12-72 hours
<b>Associated Symptoms</b>	nausea, vomiting, diarrhea, headache, dizziness, fatigue, irritability

# Secondary Dysmenorrhea



# Management

## Primary Dysmenorrhea

- **NSAIDs** are first line treatment (prostaglandin synthase inhibitors)
- **Oral contraceptives** (stabilize estrogen & progesterone levels)
- **Heating pads**
- **Exercise**
- **Psycho therapy**

## Secondary Dysmenorrhea

- **Treat the underlying cause**
- **Symptomatic relief** same as primary dysmenorrhea



# History & Examination

- **Ask questions about the pain**
  - **Site:** lower abdominal, suprapubic
  - **Associated Symptoms:** fatigue, lower back pain, headache
  - **Severity:** how much it interferes with daily activity?
- **On examination look for clues**
  - **Fibroids:** irregular enlargement of the uterus
  - **Adenomyosis:** enlarged, boggy\* uterus
  - **Endometriosis:** painful uterosacral nodules, restricted motion of the uterus
- **Screening for infection**
  - Gonorrhea
  - Chlamydia

\*flaccid uterus because of it affects myometrium

# Case

A 14 year-old G0 female presents with severe dysmenorrhea for the past six months. She began menstruating 10 months ago. Her first two periods were pain-free and 2 months apart. Since then, she has menstruated every 28 days, and has associated nausea, diarrhea and headaches. She misses school due to the pain. She says that she gets partial relief by using 3-4 Advil, two or three times a day during her period. You speak to the patient without her mother about the possibility of sexual activity, which she denies. She is a good student, is involved in sports and after school programs. She denies use of drugs or alcohol. The review of systems, past medical history and social history are noncontributory. The patient's mother has endometriosis.

**Physical examination:** She is afebrile. Abdominal exam is benign. Because the patient is virginal, pelvic examination is deferred. Abdominal pelvic ultrasound reveals a normal size ante flexed uterus and normal sized ovaries with multiple small sub-centimeter follicles. There are no adnexal masses or tenderness.

**Laboratory:** Urinalysis is negative for blood, nitrites and leukocytes.

# Case Questions

## 1. Define and distinguish between primary and secondary dysmenorrhea.

- Dysmenorrhea is defined as painful menstruation. It is common and contributes to recurrent disability in 10- 15% of women in their early reproductive years.
- **Primary dysmenorrhea:**
  - Begins with the onset of ovulation
  - Present in up to 90% of teenagers.
  - Due to an excess of **prostaglandin F2Alpha (PGF2a)** production in the endometrium.
  - This potent smooth-muscle stimulant causes intense uterine contractions and resulting pain.
  - Systemic effects include nausea, fatigue, irritability, dizziness, diarrhea and headache in up to 45% of patients.
  - There are no abnormal physical findings in the gynecological exam for primary dysmenorrhea.

# Case Questions

- **Secondary dysmenorrhea:**
  - **Extrauterine causes**
    - Endometriosis (endometrial glands outside the uterus)
    - Tumors (benign or malignant) or cysts
    - Pelvic Inflammatory Infection
    - Adhesions
    - Psychogenic (rare)
  - **Intramural causes**
    - Adenomyosis (endometrial glands in the wall of the uterus)
    - Leiomyomata (fibroids/benign tumors in the wall of the uterus)
  - **Intrauterine causes**
    - Leiomyomata
    - Polyps
    - Endometritis
    - Cervical stenosis

# Case Questions

## 2. What is the differential diagnosis and most likely diagnosis?

- **Primary dysmenorrhea** is most likely; based on the onset of pain and associated systemic symptoms as well as the partial response to NSAIDs.
- **Secondary dysmenorrhea** with underlying endometriosis is less likely; based on the normal physical examination, and the short interval since menarche. However, the patient may have an increased risk of endometriosis due to her mother's history. Most causes of secondary dysmenorrhea increase with age such as structural abnormalities ( i.e. leiomyomata, polyps).

# Case Questions

## 3. What additional evaluation is needed?

- A **careful history** is all that is needed in most cases of primary dysmenorrhea. No additional evaluation (including a pelvic exam in this young patient) is needed for the presumptive diagnosis of primary dysmenorrhea.
- However, if appropriate treatment fails to relieve symptoms within 3 months, pelvic exam and additional evaluation (such as ultrasound, hysteroscopy or laparoscopy) is needed to rule out a secondary cause such as endometriosis.

# Case Questions

## 4. How would you manage the diagnoses in #1 above?

- **Primary dysmenorrhea:**

- **Non-steroidal anti-inflammatory agents (NSAIDs)** are first line treatment
- **Combination hormonal contraceptives** (pills, ring or patch) or progesterone-only contraceptives (progesterone injection or implant) provide effective contraception and improve symptoms of dysmenorrhea.

NSAIDs are prostaglandin-synthetase inhibitors, while hormonal contraceptives inhibit ovulation and progesterone stimulation of prostaglandin production. Within three months of starting hormonal contraceptives, 90% of women experience improvement.

# Case Questions

- Secondary dysmenorrhea:
  - Is more difficult to diagnose than primary dysmenorrhea because symptoms and physical findings vary.
  - In addition to dysmenorrhea, symptoms may include menorrhagia (heavy periods) and/or pain throughout the menstrual cycle.
  - One of the most common causes of secondary dysmenorrhea is endometriosis, found in at least 10% of premenopausal women and 71-87% of women with chronic pelvic pain.
  - Treatment includes continuous **combined hormonal contraception** (see primary), medical induction of menopause with a **GnRH agonist (leuprolide)**, **laparoscopic surgery** for removal of endometriosis, fibroids or adhesions, or hysterectomy.



# Extra

- **Remember Premenstrual Syndrome Questions (by one of the doctors)**
  - **A** Aches (dysmenorrhea)
  - **B** Breast Symptoms
  - **C** Changes in mood
  - **D** Dubba (gained weight)

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