

## UNIT 4: REPRODUCTIVE ENDOCRINOLOGY, INFERTILITY & RELATED TOPICS

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# Educational Topic 43: Amenorrhea

**Rationale:** The absence of menstrual bleeding may represent an anatomic or endocrine etiology. A systematic approach to the evaluation of amenorrhea will aid in the diagnosis and treatment of its cause.

### Intended Learning Outcomes:

A student should be able to:

- Define amenorrhea and oligomenorrhea
- Explain the pathophysiology and identify the etiologies of amenorrhea and oligomenorrhea, including possible nutritional causes
- Describe associated symptoms and physical examination findings of amenorrhea
- Discuss the steps in the evaluation and initial management of amenorrhea and oligomenorrhea
- Describe the consequences of untreated amenorrhea and oligomenorrhea

### TEACHING CASE

**CASE:** A 26 year-old G2P2 woman presents to your office because she has had no periods for 9 months. She delivered two full-term healthy children vaginally and their ages are 5 and 3. She breastfed her youngest child for one year. Her menses resumed soon after weaning and were normal in duration and interval until 9 months ago. She is not using any contraception, although intercourse is infrequent. She feels very fatigued, has frequent headaches and has had trouble losing weight. She has no history of abnormal Pap smears or STI's. She takes no medications. She is married and works from home as a computer consultant. On exam, BP= 120/80, P= 64, Ht= 5'8", Wt= 160 pounds. She appears tired but in no distress. Breast exam reveals no masses, dimpling, galactorrhea or retraction. Pelvic exam shows dry vaginal mucosa but is otherwise normal. HCG is negative.

### COMPETENCY-BASED DISCUSSION & KEY TEACHING POINTS:

Competencies addressed:

- Patient care
- Medical Knowledge
- System-Based Practice

1. Does this patient have primary amenorrhea, secondary amenorrhea or oligomenorrhea?
2. What is the differential diagnosis for this disorder? Describe the relevant associated symptoms, physical exam findings, laboratory findings and pathophysiology for each of these.
3. What additional studies are needed?
4. Consider that this patient has a prolactin level of 130. The test, when repeated with the patient fasting is 100. What is your next step?
5. How would your next step differ if the patient had normal labs with an estradiol level of 30pcg/ml and an FSH of 2mIU/ml. What further evaluation is needed and what treatment would you offer her? What is she at risk for?
6. If the patient had a withdraw bleed to a progestational challenge and a normal TSH and prolactin, what would be the most likely diagnosis, first line treatment, and long term concern if untreated?

#### REFERENCES

- Beckman CRB, et al. *Obstetrics and Gynecology*. 7th ed. Philadelphia: Lippincott, Williams & Wilkins, 2013.
- Hacker NF, Moore JG, et al. *Essentials of Obstetrics and Gynecology*. 5th ed. Philadelphia: Saunders, 2010.

