

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

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# Educational Topic 42: Puberty

**Rationale:** Puberty consists of physical and emotional changes associated with the maturation of the reproductive system. In order to provide appropriate care and counseling, the physician must have an understanding of normal puberty, and recognize deviation from normal.

### Intended Learning Outcomes:

A student should be able to:

- Describe the changes in the hypothalamic-pituitary-ovarian axis and target organs during normal puberty
- Explain the normal sequence of pubertal events and ages at which these changes occur
- Discuss the psychological issues associated with puberty
- Define precocious and delayed puberty and describe the steps in the initial evaluation of these conditions

### TEACHING CASE

**CASE:** A 15 year-old female comes in for exam because she has not had her period. She seemed to be developing normally and had normal breast development that started about 3 years ago and she has pubic hair. She met her developmental milestones in childhood and is of normal height and weight. She has not had any significant medical illnesses. Her ROS is negative and her family history is negative.

She is active in school and is a cheerleader. She works out with the team and runs. She does well in school. She lives at home with her mom, dad and sister. She reports she has a boyfriend but has not been sexually active.

On physical exam, she is well appearing, BP is 100/60, weight 130 pounds, height 5 feet 7 inches. Breast exam: appear symmetric, areola are darkened bilaterally with nipple continuous with the areola, abdomen: soft, non-tender, no masses and external genitalia: soft straight hair covering the mons but not extending to the thighs.

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

Competencies addressed:

- Patient Care
- Medical Knowledge
- Systems-based Practice

1. What Tanner stage is this patient?
2. What is the normal process of puberty in girls?
3. What is the differential diagnosis for this patient's presentation?
4. What key test must be performed first?
5. What further history must be elicited?
6. What further studies will help refine the diagnosis?
7. If the patient has eugonadotropic eugonadism, what further testing should be performed?

8. How would you define precocious puberty, what is the most common cause and what psychosocial issues does this raise?

#### 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.