

## **UNIT TWO: OBSTETRICS**

### **EDUCATIONAL TOPIC 18: PREECLAMPSIA-ECLAMPSIA**

**Rationale:** Preeclampsia-eclampsia accounts for significant morbidity and mortality in both the mother and newborn.

**Intended Learning Outcomes:**

The student will demonstrate the ability to:

- Classify the types of hypertension in pregnancy
- Describe the pathophysiology of preeclampsia-eclampsia
- Recognize the signs and symptoms to diagnose preeclampsia-eclampsia
- Explain the management and treatment of a patient with preeclampsia-eclampsia
- List the maternal and fetal complications associated with preeclampsia-eclampsia
- Discuss preeclampsia prevention in high-risk groups

#### **TEACHING CASE**

**CASE:** An 18 year old G1P0 currently at 38 0/7 weeks presents for her routine prenatal visit. She has had an uncomplicated pregnancy up to this point, with the exception of a late onset of prenatal care and obesity (BMI of 35 kg/m<sup>2</sup>). She reports that during the past week, she has noted some swelling of her hands and feet. She also has been feeling a bit more fatigued and has had a headache on and off. She reports good fetal movement. She has had some contractions on and off, but nothing persistent. Her blood pressure is 147/92 and her urine dip has 2+ protein/no ketones/no glucose. The fundal height measures 37 cm, the fetus is cephalic with a heart rate of 144 bpm. On physical exam you note that the patient has 3+ pre-tibial edema, and trace edema of her hands and face. She has 2+ deep tendon reflexes and 2 beats of clonus. You review her blood pressures up to this point and note that at the time of her first prenatal visit at 18 weeks, her blood pressure was 130/76 and she had no protein in her urine. However, since that visit, her blood pressures seem to have been climbing higher with each visit. Her last visit was one week ago, and she had a blood pressure of 138/88 with trace protein in the urine.

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

Competencies addressed:

- Patient Care
- Medical Knowledge
- Systems-Based Practice

1. What is the appropriate method for assessing blood pressure in the ambulatory setting and what is considered a hypertensive blood pressure during pregnancy?

2. List the types of hypertensive syndromes that can occur during pregnancy and briefly describe each.
3. What signs and symptoms are associated with preeclampsia (subjective and objective)? What laboratory abnormalities can be seen?
4. How does the physiology of preeclampsia lead to the clinical symptoms and findings? Which organs can be affected by preeclampsia?
5. What is the management and treatment of preeclampsia? What antihypertensive agents do we use in pregnancy?
6. What types of maternal and fetal complications are associated with preeclampsia?
7. Which factors place women at high-risk for developing preeclampsia? Is there any treatment options to decrease the risk of preeclampsia in these high-risk women?

## REFERENCES

ACOG Practice Bulletin, Number 222: Gestational Hypertension and Preeclampsia. Obstetrics & Gynecology 135(6):p e237-e260, June 2020. | DOI: 10.1097/AOG.0000000000003891

ACOG Practice Bulletin No. 203: Chronic Hypertension in Pregnancy. Obstetrics & Gynecology 133(1):p e26-e50, January 2019. | DOI: 10.1097/AOG.0000000000003020

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