Case Study 73

Name _____ Class/Group _____ Date _____

Scenario

You are a registered nurse in the emergency department (ED). It is a hot summer day and S.R., a 25-year-old woman, comes to the ED with severe left flank and abdominal pain and nausea with vomiting. S.R. looks very tired, her skin is warm, and she is perspiring. She paces about the room doubled over and is clutching her abdomen. S.R. tells you the pain started early this morning and has been pretty steady for the past 6 hours. She gives a history of working outside as a landscaper and takes little time for water breaks. Her past medical history includes three kidney stone attacks, all occurring during late summer. Her abdomen is soft and without tenderness, but her left flank is extremely tender to touch. You place S.R. in one of the examination rooms and take the following vital signs: 188/98, 90, 20, 99° F (37.2° C). A voided urinalysis shows RBCs of 50 to 100 on voided specimen and WBCs of zero.

1. What could be the cause of the blood in her urine? How could you rule out some of these causes?

2. The physician orders an intravenous pyelogram (IVP). What questions do you need to ask S.R. before the test is conducted? What blood test results do you need to check before she has an IVP?

3. S.R. states she had an allergic reaction during her last IVP and was instructed, "Don't let anyone give you dye for any testing." The physician cancels the IVP. What alternative test will be conducted?

CASE STUDY PROGRESS

The noncontrast CT scan shows a left 2-mm ureteral vesicle junction stone.

4. What are the most common types of stones? Select all that apply.
   a. Cystine
   b. Struvite
   c. Uric acid
   d. Calcium oxalate
   e. Calcium phosphate

5. What is the most likely cause of S.R.'s stone?

6. What is a possible complication if S.R.'s stone is not removed?
   a. Trabeculation
   b. Hydronephrosis
   c. Nephrosclerosis
   d. Nephrotic syndrome

7. Identify 2 methods of treating a patient with a ureteral vesicle junction stone.

CASE STUDY PROGRESS

S.R. was discharged with instructions to strain all urine and return if she experienced pain unrelieved by the pain medication or increased nausea and vomiting.

8. What specific instructions will you give S.R. about straining her urine, fluid intake, medications, and activity?

CASE STUDY PROGRESS

S.R. returns to the ED in 6 hours with pain unrelieved by the pain medication and increased blood in her urine. She is being held in the ED until she can be transported to surgery.

9. What is the immediate plan of care for S.R.?

CASE STUDY PROGRESS

A 2-mm calculus was removed by basket extraction. Pathologic examination reported the stone to be calcium oxalate.

10. If S.R. continues to form calcium oxalate stones, what recommendations would the physician make for S.R.?

11. Because S.R.'s stone has been reported as calcium oxalate, she is referred to a registered dietitian for guidance on a diet that will prevent further development of stones. Which statements are true regarding recommendations for S.R.'s diet? Select all that apply.
a. Decrease fat intake.
b. Decrease sodium intake.
c. Drink at least 3 to 4 liters of water each day.
d. Avoid eating organ meats, bacon, citrus fruits, and red wine.
e. Avoid chocolate, spinach, tomatoes, dried fruits, beans, sardines, and nuts.

12. After an education session, you use the Teach-Back technique to assess S.R.'s understanding of her new dietary guidelines. Which statement by S.R. indicates a need for further teaching?
a. "I will avoid coffee, cocoa, and chocolate."
b. "I will not add salt to my food when cooking."
c. "I will drink at least 3 liters of water each day."
d. "I will increase my intake of milk and cheese daily."

CASE STUDY OUTCOME

S.R. recovers from this most recent episode and continues to follow the protocol for fluid intake and dietary measures. One year later, she has yet to report a recurrence of stones.