

## Case Study 71

Name \_\_\_\_\_ Class/Group \_\_\_\_\_ Date \_\_\_\_\_

### ► Scenario

G.W., a 34-year-old African American man, presents with increasing right knee swelling. He states that the swelling has gotten worse over the past 2 weeks and on presentation is now having difficulty ambulating. He reports taking over-the-counter ibuprofen 200 mg tablets at least 4 to 8 tablets per day for nearly 1 year for persistent back and knee pain. He has not seen his primary care physician (PCP) in nearly 2 years. G.W. also complains of weakness, fatigue, decreased urine output, and joint pain and stiffness. He also tells you that when he does urinate, it looks “rusty.” His vital signs are as follows: BP 210/100, P 86, R 24, T 98.7° F (37.1° C).

1. What are the health risks associated with taking ibuprofen for an extended period?
2. What specific questions would you ask G.W. based on his reported symptoms?

### CASE STUDY PROGRESS

G.W. tells you that a few years ago he was diagnosed with high blood pressure, but he did not like the medication's side effects, so he stopped taking it. He said that he was told that he had “kidney problems” but never kept the appointments to check his kidneys. After further assessment, the nurse finds that the abdomen appears firm, round, and distended with edema. He has +2 edema on his ankles and shins bilaterally. He reports decreased urine output; on admission urine is dark and rust-colored. G.W. is alert and oriented to person, place, time and situation. He is lethargic but easily arousable and coherent. His blood work shows a BUN of 35 mg/dL (12.5 mmol/L), serum creatinine of 4.7 mg/dL (415 mcmol/L), albumin 1.2 g/dL (12 g/L), and H&H 7.1 g/dL (71 g/L) & 23.5%. The results of his urinalysis are listed here:

## Chart View

## Urinalysis

**Appearance**

Color:  
 Odor:  
 pH  
 Protein  
 Glucose  
 White blood cells  
 WBC casts  
 Red blood cells  
 RBC casts

**Clear**

Rust  
 Aromatic  
 6.2  
 14 mg/dL  
 Negative  
 5  
 Many  
 10  
 Many

3. The physician suspects glomerulonephritis. Which assessment findings and lab results support this diagnosis?
  
4. What risk factors, if any, does G.W. have for developing glomerulonephritis?
  
5. Differentiate acute and chronic glomerulonephritis. Which one does G.W. have? Defend your answer.
  
6. What diagnostic tests are used to confirm the diagnosis of glomerulonephritis?
  
7. G.W. asks you, "What is glomerulonephritis? Do I have a kidney infection?" Which answer is correct?
  - a. "No, you have had an allergic reaction to the ibuprofen."
  - b. "Yes, glomerulonephritis is a chronic infection of the kidneys."
  - c. "Yes, you had a bladder infection that led to a kidney infection."
  - d. "No, glomerulonephritis is an inflammation of a section of the kidneys."



**CASE STUDY PROGRESS**


The nephrologist is consulted and the results of a renal biopsy confirm the diagnosis of chronic glomerulonephritis. G.W. received a furosemide (Lasix) drip, and had a total urine output of 450 mL in the next 24 hours. G.W.'s BP has improved but remains elevated at 198/102. The nephrologist ordered lisinopril 5 mg PO once daily, IV methylprednisolone (Solu-Medrol) and cyclophosphamide 2 mg/kg PO daily.

8. How does lisinopril work to reduce blood pressure?
  - a. Increases the heart rate.
  - b. Increases preload and afterload.
  - c. Causes systemic vasoconstriction.
  - d. Prevents the conversion of angiotensin I to angiotensin II.
9. What nursing considerations are important when giving lisinopril?

- 10.** What are the expected outcomes of furosemide (Lasix) therapy? Select all that apply.
- a. Diuresis of excess fluid
  - b. Reduced blood pressure
  - c. Decreased BUN and creatinine levels
  - d. Increased systemic vascular resistance
  - e. Increased water, sodium, and potassium excretion

- 11.** What do you need to monitor while G.W. is on a furosemide (Lasix) infusion?

- 12.** Which findings would indicate potential adverse effects of a furosemide (Lasix) infusion? Select all that apply.
- a. Tinnitus
  - b. Dizziness
  - c. Weakness
  - d. Dry mouth
  - e. Increased blood pressure

-  **13.** Cyclophosphamide comes in 50 mg tablets. G.W. weighs 110 pounds (50 kg). How many 50 mg tablets will he receive for each daily dose of cyclophosphamide?
- 14.** Discuss at least 3 nursing interventions that are important while the patient is on cyclophosphamide therapy.

**CASE STUDY PROGRESS**

Orders for G.W. include fluid restriction and a "renal diet." The dietitian visits G.W. to discuss the changes to his diet.

- 15.** Which of these reflect a renal diet? Select all that apply.
- a. High protein diet
  - b. Reduced salt intake
  - c. Increased potassium intake
  - d. Reduced phosphorus intake
  - e. Taking calcium supplements

- 16.** Discuss the rationale behind the fluid restriction and renal diet.

**CASE STUDY OUTCOME**

After 3 days, G.W.'s creatinine and BUN remained elevated with continued hypertension, edema, and decreased urine output. He was started on hemodialysis for management of renal function and the Solu-Medrol was changed to PO prednisone. He remained in the hospital for 3 weeks before being transferred to a rehabilitation facility.