NURSING CARE PLAN  A Client with Acute Glomerulonephritis

Jung-Lin Chang is a 23-year-old graduate student in biology. He presents at the university health center with brown and foamy urine. The physician there admits him to the infirmary and orders a throat culture, ASO titer, CBC, BUN, serum creatinine, and urinalysis.

ASSESSMENT
Connie King, the nurse admitting Mr. Chang, notes that his history is essentially negative for past kidney or urinary problems. He relates having had a "pretty bad" sore throat a couple of weeks before admission. However, it was during midterms, so he took a few antibiotics he had from a previous bout of strep throat, increased his fluids, and did not see a doctor. The sore throat resolved, and he felt well until noticing the change in his urine. He admits that his eyes seemed a little puffy, but he thought this was due to lack of sleep and fatigue. He has eaten little the past 2 days, but was not alarmed because his food intake is irregular most of the time.

Physical assessment findings include T 98.8°F (37.1°C), PO, P 98, R 18, and BP 136/90. Weight 165 pounds (75 kg), up from his normal of 160 (72.5 kg). Moderate periorbital edema and edema of hands and fingers noted.

Throat culture is negative, but the ASO titer is high. CBC essentially normal. BUN 42 mg/dL, serum creatinine 2.1 mg/dL. Urinalysis reveals the presence of protein, red blood cells, and RBC casts. A subsequent 24-hour urine protein analysis shows 1025 mg of protein (normal 30 to 150 mg/24 hours).

The physician diagnoses acute poststreptococcal glomerulonephritis and places Mr. Chang on bed rest with bathroom privileges. He orders fluid restriction (1200 mL/day) and a restricted sodium and protein diet.

DIAGNOSES
■ Excess Fluid Volume related to plasma protein deficit and sodium and water retention
■ Risk for Imbalanced Nutrition: Less than Body Requirements related to anorexia
■ Anxiety related to prescribed activity restriction
■ Risk for Ineffective Therapeutic Regimen Management related to lack of information about glomerulonephritis and treatment

EXPECTED OUTCOMES
■ Maintain blood pressure within normal limits.
■ Return to usual weight with no evidence of edema.
■ Consume adequate calories following prescribed dietary limitations.
■ Verbalize reduced anxiety regarding ability to continue studies.

■ Demonstrate an understanding of acute glomerulonephritis and prescribed treatment regimen.

PLANNING AND IMPLEMENTATION
■ Vital signs every 4 hours; notify physician of significant changes.
■ Weigh daily; intake and output every 8 hours.
■ Schedule fluids allowing 650 mL on day shift, 450 mL on evening shift, and 100 mL on night shift.
■ Arrange dietary consultation to plan a diet that includes preferred foods as allowed.
■ Provide small meals with high-carbohydrate between-meal snacks.
■ Encourage Mr. Chang to talk about his condition and its potential effects.
■ Assist with problem solving and exploring options for maintaining studies.
■ Enlist friends and family to listen and provide support.
■ Teach Mr. Chang and his family about acute glomerulonephritis and prescribed treatment.
■ Instruct in appropriate antibiotic use.

EVALUATION
Mr. Chang is released from the infirmary after 4 days. He decides to return to his parents' home for the 6 to 12 weeks of convalescence prescribed by his doctor. Mr. Chang's renal function gradually returns to normal with no further azotemia and minimal proteinuria after 4 months. He verbalizes understanding of the relationship between the strep throat, his inappropriate use of antibiotics, and the glomerulonephritis. He says, "I may not always remember to take every pill on time in the future, but I sure won't save them for the next time again!"

CRITICAL THINKING IN THE NURSING PROCESS
1. How did Mr. Chang’s use of “a few” previously prescribed antibiotics to treat his sore throat affect his risk for developing poststreptococcal glomerulonephritis?
2. What additional risk factors did Mr. Chang have for developing glomerulonephritis?
3. The initial manifestations of acute poststreptococcal glomerulonephritis and rapidly progressive glomerulonephritis are very similar. What diagnostic test would the physician use to make the differential diagnosis? Develop a plan of care for a client undergoing this examination.

See Evaluating Your Response in Appendix C.

Monitor vital signs, including blood pressure, apical pulse, respirations, and breath sounds, at least every 4 hours. Report significant changes. Excess fluid increases the cardiac workload and the blood pressure. Tachycardia may result. Associated electrolyte imbalances can cause dysrhythmias. Increased pulmonary vascular pressure can lead to pulmonary edema, tachypnea, dyspnea, and crackles (rales) in the lungs.

Record intake and output every 4 to 8 hours, or more frequently as indicated. Accurate intake and output records help determine fluid volume status.

PRACTICE ALERT
Weigh daily, using consistent technique (time of day, scale, and clothing). Accurate daily weights are the best indicator of approximate fluid balance (Wise et al., 2000).