Renal System Practice Quiz

1. The nurse determines that a patient with acute renal failure has prerenal oliguria when
   a. Urine testing reveals a low specific gravity
   b. The causative factor is malignant hypertension
   c. Urine testing reveals a high sodium concentration
   d. **Reversal of the oliguria occurs with fluid replacement**
      With prerenal failure there is decreased perfusion to the kidneys, no actual damage;
      increasing fluid and perfusion should increase urine output

2. Tubular damage is indicated in the patient with acute renal failure by a urinalysis finding of
   a. Hematuria
   b. **Specific gravity fixed at 1.010**
   c. Urine sodium of 12 mEq/L
   d. Osmolality of 100 mOsm/kg
      The kidney cannot concentrate urine leading to fixed specific gravity

3. Metabolic acidosis occurs in the oliguric phase of acute renal failure as a result of impaired
   a. **Ammonia synthesis**
   b. Excretion of sodium
   c. Excretion of bicarbonate
   d. Conservation of potassium
      The kidney can no produce ammonia to excrete the hydrogen ions

4. Although both BUN and serum creatinine levels are elevated in renal failure, a BUN of 85 mg/dL
   and a serum creatinine of 3.8 m/dL would most likely occur in a patient with acute renal failure
   caused by
   a. **Massive trauma**
   b. Bladder obstruction
   c. Decompensated heart failure
   d. Acute glomerulonephritis
      Normally there is a 10:1 ration of BUN/Creatinine. This ratio is increased when renal
      failure is caused from tissue breakdown

5. The nurse determines that a patient with acute renal failure is in the recovery phase when the
   patient experiences
   a. A return to normal weight
   b. A urine output of 3700 mL/day
   c. **Decreasing BUN and creatinine levels**
   d. Decreasing sodium and potassium levels
During the recovery phase the BUN and creatinine decrease

6. A patient with acute renal failure has a serum potassium level of 6.8 mEq/L and the following ABG results: pH 7.28, PaCO2 30, PaO2 86, HCO3 18. The nurse recognizes that treatment of the acid base problem would cause a decrease in the
   a. pH
   b. **potassium level**
   c. bicarbonate level
   d. carbon dioxide level
   K moves out of the cell during acidosis, correcting it will cause the K to move back into the cell

7. In replying to a patient’s questions about the seriousness of her chronic kidney disease, the nurse knows that the stage of chronic kidney disease is based on
   a. The total daily urine output
   b. **The GFR**
   c. Serum creatinine and urea levels
   d. The degree of altered mental status
   The GFR decides the degree of kidney failure

8. The nurse identifies a nursing diagnosis of risk for injury: fracture related to alterations in calcium and phosphorus metabolism for a patient with chronic renal disease. The pathologic process directly related to the risk for fractures is
   a. Loss of aluminium through the impaired kidneys
   b. Deposition of calcium phosphate in soft tissues of the body
   c. **Impaired vitamin D activation resulting in decreased absorption of calcium**
   d. Increased release of parathyroid hormone in response to decreased calcium levels
   The kidneys activate vitamin D. When they are not functioning properly vitamin D is not activated and calcium absorption is decreased

9. A patient with chronic renal insufficiency weighs 70 kg and has the following laboratory results: creatinine clearance 18mL/min; potassium 6.8 mEq/L; BUN 75 mg/dL; serum creatinine 6.3 mg/dL. An appropriate dietary modification for the patient is
   a. A protein restriction of 70 g/day
   b. **A potassium restriction of 2 to 3 g/day**
   c. A sodium restriction of 1000 mg/day
   d. Unlimited intake of breads and cereals
   The protein and sodium restriction are too high, the potassium restriction is correct

10. The most appropriate snack for the nurse to offer the patient with chronic renal disease is
    a. Raisins
    b. Ice cream
c. Dill pickles
d. **Hard candy**
   Raisins are high in potassium, ice cream is high in protein, dill pickles are high in sodium. The hard candy is appropriate, the renal failure patient can have unrestricted sugar and starch intake unless they are diabetic.

11. During the nursing assessment of the patient with renal insufficiency, the nurse asks the patient specifically about a history of
   a. Angina
   b. Asthma
   c. **Hypertension**
   d. Rheumatoid arthritis
   Hypertension is the most common cause of renal problems.

12. To prevent the most common serious complication of peritoneal dialysis (PD), it is important for the nurse to
   a. Infuse the dialysate slowly
   b. **Use strict aseptic technique in the dialysis procedures**
   c. Have the patient empty the bowel before the inflow procedure
   d. Reposition the patient frequently and promote deep breathing.
   The most common complication is infection. Using aseptic technique reduces this risk.

13. The composition of the peritoneal dialysate solution requires careful monitoring of the patient who also has
   a. **Diabetes**
   b. Liver failure
   c. Heart failure
   d. Chronic obstructive pulmonary disease
   Dialysate contains high concentrations of glucose.

14. The nurse evaluates the patency of an AV graft by
   a. Palpating for pulses distal to the graft site
   b. **Auscultating for the presence of a bruit at the site**
   c. Evaluating the color and temperature of the extremity
   d. Assessing for the presence of numbness and tingling distal to the site
   We auscultate for a bruit, palpate for a thrill.

15. A patient returns from her initial hemodialysis treatment with nausea, confusion, twitching and jerking. The pathophysiologic mechanism of dialysis responsible for these manifestations is a
   a. Loss of blood into the dialyzer caused by heparin use
   b. Rapid removal of vascular volume causing hypovolemia
   c. **High osmotic gradient in the brain causing cerebral edema**
d. Neuromuscular hypersensitivity resulting from fluid and sodium loss
   These are symptoms of disequilibrium syndrome which is caused from the high osmotic
   gradient in the brain causing cerebral edema

16. A patient rapidly progressing toward end stage renal disease asks about the possibility of a
   kidney transplant. In responding to the patient, the nurse knows that contraindications to
   kidney transplantation include
   a. Hepatitis C infection
   b. Coronary artery disease
   c. Refractory hypertension
   d. **Extensive vascular disease**
   Extensive vascular disease means there will be impaired blood flow to a new kidney

17. During the immediate postoperative care of the recipient of a kidney transplant, the nurse
   expects to
   a. **Regulate fluid intake hourly based on urine output**
   b. Find urine tinged drainage on the abdominal dressing
   c. Medicate the patient frequently for incisional flank pain
   d. Remove the Foley catheter to evaluate the ureteral implant
   Fluid balance is one of the most important aspects of post op care

18. Signs and symptoms of chronic rejection of the kidney are caused by
   a. Recurrence of the original kidney disease
   b. **Gradual occlusion or the renal blood vessels**
   c. T-cytotoxic cell attack on the foreign kidney
   d. Destruction of kidney tissue by sensitized antibodies
   This leads to decreased perfusion to the kidney and impaired functioning

19. Signs and symptoms of acute rejection that the nurse should teach the patient to observe for
   include
   a. Tachycardia and headache
   b. **Fever and painful transplant site**
   c. Severe hypotension and weight loss
   d. Recurrent urinary tract infections and oral yeast infections
   These are indicators of acute rejection
20. Match the following conditions with their associated etiologies of acute renal failure (answers may be used more than once)

- a. _1____ Decreased cardiac output  
- b. _3____ Mechanical outflow obstruction  
- c. _1____ Initial cause of most acute renal failure  
- d. _3____ Prostate cancer  
- e. _2____ Tubular obstruction by myoglobin  
- f. _1____ Hypovolemia  
- g. _3____ Renal stones  
- h. _2____ Nephrotoxic drugs  
- i. _3____ Bladder cancer  
- j. _1____ Renal vascular obstruction  
- k. _2____ Acute glomerulonephritis  
- l. _1____ Anaphylaxis

1. prerenal
2. intrarenal
3. Postrenal

© Jana Ogden and Indian Hills Community College