Nursing Implications for Diagnostic Tests

Glomerular Disease

CREATININE CLEARANCE

Preparation of the Client

- Obtain a 24-hour urine specimen container without preservative.
- Instruct to begin the specimen collection at the designated time by voiding and discarding this initial specimen. Collect all urine voided for the next 24 hours, emptying the bladder at the end of the collection time and saving the specimen. Do not discard toilet paper in the specimen container.
- Instruct to void and save the specimen prior to defecating to prevent contamination or loss of urine.
- Refrigerate or keep the urine specimen on ice during the collection period.
- Post signs in the client’s room and bathroom indicating the hours of urine collection to prevent inadvertent discarding of the urine.
- Collect or have laboratory personnel collect a venous blood sample during the 24-hour urine collection period.
- Note the client’s name, age, weight, and height on the laboratory requisition.

Client and Family Teaching

- Generally, no special diet is required during the test.
- Follow instructions for 24-hour specimen collection if the test is being done on an outpatient basis.

KIDNEY SCAN (RENAL SCAN)

Preparation of the Client

- Informed consent is required. Provide teaching and answer questions as needed.
- Make sure that the client is well hydrated prior to the procedure. Provide two to three glasses of water before the procedure if indicated.
- Obtain weight (used to calculate the amount of radioisotope to be injected).
- Have void prior to the procedure.
- After the procedure, increase fluid intake to promote excretion of the radioisotope.
- No special radioactivity precautions are indicated; instruct to flush the toilet immediately after voiding and to wash hands thoroughly.
- Because of the slight potential for harm to a developing fetus, pregnant personnel should not be assigned to care for clients during the first 24 hours after this procedure.

Client and Family Teaching

- Increase fluid intake before and after the renal scan.
- No special diet or other preparation is required.
- The test takes 1 to 4 hours.
- No anesthesia is required, and you will experience no pain or discomfort other than that associated with remaining still for a period of time.

RENOAL BIOPSY

Preparation of the Client

- Informed consent is required for a kidney biopsy. Answer questions and provide additional information as needed.
- Maintain npo status from midnight before the procedure.
- Note hemoglobin and hematocrit prior to the procedure.
- If the procedure is to be performed at the bedside, obtain biopsy tray and other necessary supplies.
- Following procedure, apply a pressure dressing and position supine to help maintain pressure on the biopsy site.
- Monitor closely for bleeding during the first 24 hours after the procedure:
  a. Check vital signs frequently. Notify the physician of tachycardia, hypotension, or other signs of shock.
  b. Monitor biopsy site for bleeding.
  c. Check hemoglobin and hematocrit, comparing with preprocedure values.
  d. Observe for and report complaints of flank or back pain, shoulder pain (caused by diaphragmatic irritation if hemorrhage occurs), pallor, lightheadedness.
  e. Monitor urine output for quantity and hematuria. Initial hematuria should clear within 24 hours.
- Monitor for other potential complications such as inadvertent penetration of the liver or bowel. Report abdominal pain, guarding, and decreased bowel sounds.
- Encourage fluids during the initial postprocedure period.

Client and Family Teaching

- Local anesthesia is used at the injection site. The procedure may be uncomfortable but should not be painful.
- When the needle is inserted, you will be instructed not to breathe to prevent kidney motion.
- The entire procedure takes approximately 10 minutes.
- Avoid coughing during the first 24 hours after the procedure. Strenuous activity such as heavy lifting may be prohibited for approximately 2 weeks after the procedure.
- Report any signs and symptoms of complications, such as hemorrhage or urinary tract infection, to the physician.

Medications

Although no drugs are available to cure glomerular disorders, medications are used to treat underlying disorders, reduce inflammation, and manage the symptoms.

Antibiotics are prescribed for the client with poststreptococcal glomerulonephritis to eradicate any remaining bacteria,