NURSING CARE \ OF THE CLIENT UNDERGOING PERITONEAL DIALYSIS

PREDIALYSIS CARE

- Document vital signs including temperature, orthostatic blood pressures (lying, sitting, and standing), apical pulse, respirations, and lung sounds. These baseline data help assess fluid volume status and tolerance of the dialysis procedure. Hypertension, abnormal heart or lung sounds, or dyspnea may indicate excess fluid volume. Poor respiratory function may affect the ability to tolerate peritoneal dialysis. Temperature measurement is vital, because infection is the most common complication of peritoneal dialysis.
- Weigh daily or between dialysis runs as indicated. Weight is an accurate indicator of fluid volume status.
- Note BUN, serum electrolyte, creatinine, pH, and hematocrit levels prior to peritoneal dialysis and periodically during the procedure. These values are used to assess the efficacy of treatment.
- Measure and record abdominal girth. Increasing abdominal girth may indicate retained dialysate, excess fluid volume, or early peritonitis.
- Maintain fluid and dietary restrictions as ordered. Fluid and diet restrictions help reduce hypervolemia and control azotemia.
- Have the client empty the bladder prior to catheter insertion. Emptying the bladder reduces the risk of inadvertent puncture.
- Warm the prescribed dialysate solution to body temperature (98.6°F or 37°C) using a warm water bath or heating pad on low setting. Dialysate is warmed to prevent hypothermia.
- Explain all procedures and expected sensations. Knowledge helps reduce anxiety and elicit cooperation.

INTRADIALYSIS CARE

- Use strict aseptic technique during the dialysis procedure and when caring for the peritoneal catheter. Peritonitis is a common complication of peritoneal dialysis; sterile technique reduces the risk.
- Add prescribed medications to the dialysate; prime the tubing with solution and connect it to the peritoneal catheter, taping connections securely and avoiding kinks. This allows dialysate to flow freely into the abdominal cavity and prevents leaking or contamination.
- Instill dialysate into the abdominal cavity over a period of approximately 10 minutes. Clamp tubing and allow the dialysate to remain in the abdomen for the prescribed dwell time. Keep drainage tubing clamped at all times during instillation and dwell time. Dialysate should flow freely into the abdomen if the peritoneal catheter is patent. Dialysis, the exchange of solutes and water between the blood and dialysate, occurs across the peritoneal membrane during the dwell time.
- During instillation and dwell time, observe closely for signs of respiratory distress, such as dyspnea, tachypnea, or crackles. Place in Fowler’s or semi-Fowler’s position and slow the rate of instillation slightly to relieve respiratory distress if it develops. Respiratory compromise may result from overly rapid filling or overfilling of the abdomen or from a diaphragmatic defect that allows fluid to enter the thoracic cavity.
- After prescribed dwell time, open drainage tubing clamps and allow dialysate to drain by gravity into a sterile container. Note the clarity, color, and odor of returned dialysate. Blood or feces in the dialysate may indicate organ or bowel perforation; cloudy or malodorous dialysate may indicate an infection.
- Accurately record amount and type of dialysate instilled (including any added medications), dwell time, and amount and character of the drainage. When more dialysate drains than has been instilled, excess fluid has been lost (output). If less dialysate is returned than has been instilled, a fluid gain has occurred (intake).
- Monitor BUN, serum electrolyte, and creatinine levels. These values are used to assess the effectiveness of dialysis.
- Troubleshoot for possible problems during dialysis.
  a. Slow dialysate instillation. Increase the height of the container and reposition the client. Check tubing and catheter for kinks. Check abdominal dressing for wetness, indicating leakage around the catheter. Slow dialysate flow may be related to a partially obstructed tube or catheter.
  b. Excess dwell time. Prolonged dwell time may lead to water depletion or hyperglycemia.
  c. Poor dialysate drainage. Lower the drainage container, reposition, check for tubing kinks. Check abdominal dressing. Tubing or catheter obstruction can also interfere with dialysate drainage.

POSTDIALYSIS CARE

- Assess vital signs, including temperature. Comparison of pre- and postdialysis vital signs helps identify beneficial and adverse effects of the procedure.
- Time meals to correspond with dialysis outflow. Scheduling meals while the abdomen is empty of dialysate enhances intake and reduces nausea.
- Teach the client and family about the procedure. The client may elect to use peritoneal dialysis at home to manage end-stage renal disease and prevent uremia.
- If not contraindicated, place in semi-Fowler’s position, to enhance cardiac and respiratory function.
- Report abnormal serum electrolyte values and manifestations of electrolyte imbalance. The client with ARF is at particular risk for the following electrolyte imbalances:
  a. Hyperkalemia due to impaired potassium excretion. Manifestations include irritability, nausea, diarrhea,