**PURPOSES:** The Groshong catheter is a soft, flexible, thin-walled silastic tube. The catheter differs from some of the other silicone central line catheters (i.e.: Hickman or Broviac) in that it has a pressure-sensitive valve at the end of the tube that sits in the blood stream. This makes the insertion process easier and the valve prevents blood from flowing back into the catheter. This unique feature allows the convenience that it is unnecessary to clamp the catheter.

The Groshong catheter is usually inserted in surgery. The closed tip lies near the heart in a large blood vessel. The external end of the tube exits in the mid-chest area (between the breasts) after being tunneled under the skin for several inches. This is called the exit site.

There is a small dacron cuff attached to the catheter that you might be able to feel under the skin. The body grows into this cuff and prevents accidental dislodgment of the catheter. It also acts as a mechanical barrier to bacteria migrating down the catheter.

The catheter is inserted to allow easy access to the blood stream. The Groshong may be used to administer intravenous fluid, special nutritional fluids, blood products and intravenous medication such as antibiotics, narcotics or chemotherapy. The Groshong may also be used for periodic blood sampling.

**POLICY:** To prevent infection and ensure proper care of the Groshong catheter the following procedures will be followed.

**PROCEDURE:**

I. Dressing Change

1. Change the dressing every other day, if it becomes wet or soiled or as ordered by the physician.
2. Supplies needed:
   1. 1 2x2 sterile dressing or Tegaderm
   2. 1 inch paper tape
   3. Betadine swab sticks
   4. Betadine ointment
   5. Hydrogen peroxide (optional-use to remove any crusts before cleansing with Betadine)
3. Wash hands thoroughly
4. Remove old dressing. DO NOT USE SCISSORS. Inspect site for any redness, swelling, tenderness, or discharge. These signs or an oral temperature above 100 degrees may mean an infection. If noted, notify physician immediately.
5. Carefully clean the exit site and skin around the catheter with a Betadine swab. Clean in a circular motion from the base of the catheter out. Use a second swab to cleanse a radius of about three inches from the exit site. Use a third swab to clean the catheter itself, cleaning from the exit site toward the capped end of the catheter. Discard the swab stick after each use.
6. Apply just enough Betadine ointment to cover the exit site. Omit this step if a Tegaderm is used.
7. Place a 2x2 dressing or Tegaderm over the exit site, taking care not to touch the surface that will lie next to the skin.
8. Tape securely covering the entire dressing with tape. Omit this step if a Tegaderm is used.
9. Loop the catheter and tape to prevent it from pulling or dangling.
10. Clients may take a tub bath or shower prior to the dressing change.

II. Normal Saline Flush

1. Flush catheter:

- every 7 days

- after each use

- whenever blood is drawn

- if blood is seen in catheter

2. Supplies needed:

- 0.9% Bacteriostatic Sodium Chloride

- Alcohol swabs

- Betadine swabs

- 5-10 cc syringe with 1" 23 gauge needle

3. Wash hands thoroughly

4. Draw up 5cc bacteriostatic sodium chloride

5. Rub end of catheter plug for 15 seconds with a Betadine swab. Allow to dry for 2 minutes, this rids the plug of any bacteria.

6. Remove catheter plug, remove needle from syringe and inject sodium chloride. Replace cap.

7. DO NOT CLAMP THIS CATHETER. The valve prevents backflow of blood after irrigation. Clamping could damage the catheter.

III. Replacing the Catheter Adapter Plug (cap)

1. Supplies needed:

- Alcohol swabs

- Sterile leur-lok adapter plug

- Betadine swab

- 5-10 cc syringe with 1" 23 gauge needle

- 0.9% Bacteriostatic Sodium Chloride

2. Wash hands thoroughly

3. Swab the 0.9% bacteriostatic sodium chloride vial with alcohol wipe and draw up 5 cc of solution.

4. Before removing the old adapter plug, rub briskly at the connection with a Betadine swab and allow to dry for 2 minutes.

5. Open adapter plug package

6. Holding the hub of the catheter, unscrew the old cap and replace with the new.

7. Tape the connection

8. Irrigate catheter per procedure

9. Change the adapter plug every 7 days.

IV. Blood Drawing

1. Supplies needed

- blood tubes

- 10 cc syringe

- 20 cc syringe

- appropriate size syringe for blood draw

- 2 - 18 gauge 1" needles

- 0.9% bacteriostatic sodium chloride

- alcohol wipes

- catheter adapter plug (leur-lok)

- tape

-Betadine swab

2. Wash hands thoroughly

3. Swab the 0.9% bacteriostatic sodium chloride vial with alcohol wipe and draw up 20 cc sodium chloride

4. Before removing catheter cap (plug), rub briskly at the connection site with a Betadine swab and allow to dry for two minutes.

5. Remove catheter plug and attach 10 cc syringe

6. Withdraw 6 cc of blood and discard

7. Attach new syringe for lab specimen and withdraw the amount of blood necessary for lab tests.

8. Remove syringe and attach 20 cc syringe filled with 0.9% bacteriostatic sodium chloride and briskly flush in 5 cc.

9. Attach 18-gauge needle to the blood filled syringe and fill blood tubes.

10. Flush remainder of 0.9% sodium chloride through catheter briskly and remove syringe.

11. Attach a new sterile adapter plug

Note:

- When aspirating blood, pull back slowly on the syringe plunger as too rapid withdrawal can collapse the catheter.

- If client has been on TPN fluids, irrigate catheter with 30 cc of 0.9% sodium chloride prior to the blood drawing procedure

V. Special Considerations for Groshong Catheter

1. Do not use clamps with catheter at any time. They may damage the catheter

2. Acetone will dissolve the catheter and should not be used on or near the catheter.

3. Keep scissors and sharp objects away from the catheter.

4. For continuous fluid administration connect the IV tubing directly to the catheter. Do not piggyback needle into adapter plug.