DIRECTIONS FOR SELDINGER INSERTION

1. The selection of the appropriate catheter lumens should be determined by physician. To achieve proper tip placement, both lumens should be palpated for site selection and advancement of the catheter. This can lead to bending of the guidewire.

2. The selection of the appropriate catheter length is at the sole discretion of the physician. To achieve proper tip placement, proper catheter length selection is important. Routine x-ray should always follow the initial insertion of this catheter to confirm proper tip placement prior to use.

3. Administer sufficient local anesthetic to the artery.

4. Attach syringes to both extensions and purge air from the catheter and all connecting tubing and caps. Avoid air aspiration, the catheter may need to be rotated or straightened to facilitate the extension of the catheter.

5. Remove the dilator leaving the guidewire in place.

6. Close the extension clamps, remove the syringes, and place an injection cap on each luer lock connector. Avoid emboilling by keeping extension tubing clamped at all times when not in use and by aspirating the guidewire against the catheter with saline prior to each use. With each change in tubing connections, purge air from the catheter and reconnect with aseptic technique.

7. Use standard hospital protocols when handling, securing, and dressing the catheter. The appropriate extension clamps should be located just before the junction of the superior vena cava and the right atrium. Femoral tip placement to be determined by physician.

8. Irrigate catheter with saline, then clamp arterial extension. Use clamps provided. Do not clamp the venous extension as this will kink the stylet.

9. Confirm proper tip placement with fluoroscopy. The distal venous tip should be located just before the junction of the superior vena cava and the right atrium. Femoral tip placement to be determined by physician.

10. Failure to do so may result in emboilling.

11. Once the catheter is locked with heparin, close the clamps and install injection caps onto the extensions’ female luers.

12. Confirm proper tip placement with fluoroscopy. The distal venous tip should be located just before the junction of the superior vena cava and the right atrium. Femoral tip placement to be determined by physician.

13. Failure to do so may result in emboilling.

14. Once adequate aspiration has been achieved, both lumens should be irrigated using 10-20 mL of saline to prevent air embolism. Then, the catheter may need to be rotated or straightened to facilitate adequate blood flow.

15. Attach syringes to both extensions and purge air from the catheter and all connecting tubing and caps. Avoid air aspiration, the catheter may need to be rotated or straightened to facilitate the extension of the catheter.

16. Close the extension clamps, remove the syringes, and place an injection cap on each luer lock connector. Avoid emboilling by keeping extension tubing clamped at all times when not in use and by aspirating the guidewire against the catheter with saline prior to each use. With each change in tubing connections, purge air from the catheter and reconnect with aseptic technique.

17. Use standard hospital protocols when handling, securing, and dressing the catheter. The appropriate extension clamps should be located just before the junction of the superior vena cava and the right atrium. Femoral tip placement to be determined by physician.

18. Irrigate catheter with saline, then clamp arterial extension. Use clamps provided. Do not clamp the venous extension as this will kink the stylet.

19. Confirm proper tip placement with fluoroscopy. The distal venous tip should be located just before the junction of the superior vena cava and the right atrium. Femoral tip placement to be determined by physician.

20. Suture the catheter to the skin using the suture wings. Do not suture the catheter tubing.

21. Cover the insertion site with an occlusive dressing.

22. Catheter must be secured/sutured for entire duration of implantation.

The Double Lumen Catheter is indicated for use in obtaining Short-Term vascular access for Hemodialysis, Hemofiltration, and Apheresis.

It may be inserted percutaneously and is primarily placed in the internal jugular veins of an adult patient.

Alternate insertion sites include the subclavian and femoral veins as required.

This catheter is indicated for a duration less than (5) days. If reinsertion or replacement, monitor catheter condition closely.

The manufacturer shall not be liable for any injuries caused by reuse or re-sterilization of this catheter or accessories.

Content sterile and non-pyrogenic in vials, and all accessories. STERILE EO

Do not use scissors to remove dressing.

Do not use sharp instruments near the catheter insertion area. A small rolled towel may be placed lateral to the angle made by the clavicle and the first rib to define the angle and keep the skin and subcutaneous tissues from being damaged.

Caution: Do not use sharp instruments near the catheter insertion area. A small rolled towel may be placed lateral to the angle made by the clavicle and the first rib to define the angle and keep the skin and subcutaneous tissues from being damaged.

Patients requiring ventilator support are at increased risk of pneumothorax during subclavian vein cannulation, which may cause complications.

Catheterization will be performed at the apex of a triangle formed between the two heads of the sternomastoid muscle. The apex should be approximately three finger breadths above the clavicle. The carotid artery should be palpated medial to the point of catheter insertion.

The patient should lie completely on his/her back for site selection and assessment. A small rolled towel may be inserted between the shoulder blades to facilitate the extension of the catheter apex. Use standard hospital protocols when handling, securing, and dressing the catheter. The appropriate extension clamps should be located just before the junction of the superior vena cava and the right atrium. Femoral tip placement to be determined by physician.

The patient should lie completely on his/her back for site selection and assessment. A small rolled towel may be inserted between the shoulder blades to facilitate the extension of the catheter apex.

Insert the introducer needle with attached syringe into target vein. Aspire to insure proper placement.

Remove the syringe and place thumb over top of syringe. Do not remove needle or catheter. Blood flow may be directed to air embolism. The guidewire should be advanced through the side opposite the insertion site and the needle hub. Once the femoral vein is palpated medially to the point of catheter insertion, the needle should be removed and the guidewire advanced through the needle hub into the target vein.

The length of the wire inserted is determined by the size of the patient. Monitor patient for arrhythmias throughout this procedure. The patient should be placed on a cardiac monitor during this procedure. Cardiac arrhythmias may result if guidewire is allowed to pass into the right atrium. The guidewire should be clamped at all times when not in use and by aspirating the guidewire against the catheter with saline prior to each use. With each change in tubing connections, purge air from the catheter and reconnect with aseptic technique.

To achieve proper tip placement, both lumens should be palpated for site selection and advancement of the catheter. This can lead to bending of the guidewire.

Use standard hospital protocols when applicable.

Strict aseptic technique must be used during insertion, maintenance, and catheter removal procedures. Provide a sterile operating field. The Operating Room is the preferred location for catheter placement. Use sterile dressings, instruments, and accessories. Instruct patient to keep the skin above and below the insertion site. Perform surgical scrubs. Wear gown, cap, gloves, and mask. Have patient wear mask.

The selection of the appropriate catheter length is at the sole discretion of the physician. To achieve proper tip placement, proper catheter length selection is important. Routine x-ray should always follow the initial insertion of this catheter to confirm proper placement prior to use.

Additional use of the subclavian vein may be associated with subclavian vein stenosis. Tip Placement

Use only Luer Lock (threaded) syringes, and caps will reduce connector resistance.

The Double Lumen Catheter is manufactured from soft radiopaque polyurethane material which provides increased patient comfort while providing excellent biocompatibility.
The heparin solution must be removed from each lumen prior to treatment to prevent systemic heparinization of the patient. Aspiration should be based on dialysis unit protocol.

Before dialysis begins all connections to catheter and extracorporeal circuits should be examined carefully. Frequent visual inspection should be conducted to detect leaks to prevent blood loss or air embolism. If a leak is found, the catheter should be clamped immediately.

Caution: Only clamp catheter with in-line clamps provided.

Necessary remedial action must be taken prior to the continuation of the dialysis treatment.

Note: Excessive blood loss may lead to patient shock.

Hemodialysis should be performed under physician’s instructions.

HEPARINIZATION

If the catheter is not to be used immediately for treatment, follow the suggested catheter patency guidelines.

To maintain patency between treatments, a heparin lock must be created in each lumen of the catheter.

Follow hospital protocol for heparin concentration.

1. Draw heparin into two syringes, corresponding to the amount designated to kits with drugs”.

2. Withdraw syringes.

3. Attach a sterile injection cap onto the female luer of the extensions.

4. Open extension clamps.

5. Aspirate to insure that no air will be aspirated. This is usually caused by tip malposition.

Obstructions:

One-way obstructions exist when a lumen can be flushed easily but blood cannot be aspirated. This is usually caused by tip malposition.

One of the following adjustments may resolve the obstruction:

• Reposition catheter.
• Reposition patient.
• Have patient cough.
• Provided there is no resistance, flush the catheter vigorously with sterile normal saline to try to move the tip away from the vessel wall.

SITE CARE

Class skin around catheter. Chlorhexidine gluconate solutions are recommended. Iodine solutions may also be used.

Cover the exit site with occlusive dressing and leave extensions, clamps, and caps exposed for access by staff.

Wound dressings must be kept clean and dry.

Caution: Patients must not swim, shower, or soak dressing while bathing.

If profuse perspiration or accidental wetting compromises adhesion of dressing, the medical or nursing staff should be examined carefully.

Warning: Only a physician familiar with the appropriate techniques should attempt the following procedures.

INSUFFICIENT FLOWS:

The following may cause insufficient blood flows:

• Occluded arterial holes due to clotting or fibrin sheath.
• Occlusion of the arterial side holes due to contact with vein wall.

Solutions include:

• Chemical intervention utilizing a thrombolytic agent.

MANAGEMENT OF ONE-WAY OBSTRUCTIONS:

One-way obstructions exist when a lumen can be flushed easily but blood cannot be aspirated. This is usually caused by tip malposition.

One of the following adjustments may resolve the obstruction:

• Reposition catheter.
• Reposition patient.
• Have patient cough.

Caution: Due to the risk of exposure to HIV (Human Immunodeficiency Virus) or other blood borne pathogens, health care professionals should always use Universal Blood and Body Fluid Precautions in the care of all patients.

Sterile technique should always be strictly adhered to.

Clinically recognized infection at a catheter exit site should be treated promptly with the appropriate antibiotic therapy.

If a fever occurs in a patient with a catheter in place, take a minimum of two blood cultures from a site distant from catheter exit site. If blood culture is positive, the catheter must be removed immediately and the appropriate antibiotic therapy initiated. Wait 48 hours before catheter replacement.

Insertion should be made on opposite extremity.

CATHETER PERFORMANCE

Caution: Always review hospital or unit protocol potential complications and their treatment, warnings, and precautions prior to undertaking any type of mechanical or chemical intervention in response to catheter performance problems.

Warning: Only a physician familiar with the appropriate techniques should attempt the following procedures.

CATHETER REMOVAL

Warning: Only a physician familiar with the appropriate techniques should attempt the following procedures.

Caution: Always review hospital or unit protocol potential complications and their treatment, warnings, and precautions prior to catheter removal.


2. Withdraw catheter through the exit site.

3. Apply dressing in a manner to promote optimal healing.

4. Record catheter length and catheter lot number on patient’s chart.

Removal should be accomplished in the order below.

23. Remove catheter length and catheter lot number on patient’s chart.

REMEDIALLY TREATMENT

In most instances, no further heparin is necessary for 48-72 hours, provided the lumens have not been aspirated or flushed.