

Central Venous Catheters

Selection of catheter

- Use either a peripherally inserted central venous catheter, a tunneled catheter (i.e., Hickman or Broviac), or an implantable vascular access device (i.e., port) for patients 4 years of age or older, in whom long term vascular access (greater than 30 days) is anticipated. Consider use of a totally implantable access device for younger pediatric (age less than 4) who require long-term vascular access.

Selection of catheter insertion site

- Weigh the risk and benefits of placing a device at a recommended site to reduce infectious complications against the risk of mechanical complication (i.e., pneumothorax, subclavian artery puncture, subclavian vein laceration, hemothorax, thrombosis, air embolism, catheter misplacement).
- Use subclavian rather than jugular or femoral sites for central venous catheter placement unless medically contraindicated (i.e., coagulopathy, anatomic deformity).

Barrier precautions during catheter insertion

- Use sterile technique, including a sterile gown and gloves, mask, and a large sterile drape (i.e., maximal barrier precautions), for the insertion of central venous and arterial catheters.

Replacement of catheter

- Do not routinely replace non-tunneled central venous catheters as a method to prevent catheter related infections.
- All central catheters must be removed when they are no longer medically indicated or if they are strongly suspected of causing sepsis.

Catheter and catheter site care

General measures:

- Do not use single-lumen parenteral nutrition catheters for purposes other than hyperalimentation (i.e., administration of fluids, blood, or blood products).
- If a multilumen catheter is used to administer parenteral nutrition, designate one port for hyperalimentation. Do not use the designated hyperalimentation port for other purposes (i.e., administration of fluids, blood, or blood products).
- Wipe the catheter hub with an appropriate antiseptic before accessing the system.
- **Cap all stopcocks when not in use.**
- Evaluate the insertion site at least every shift for evidence of cannula-related complications and the condition of the site must be documented. If the site exhibits

redness, warmth, pain, tenderness, and/or drainage, the physician must be notified and the catheter should be evaluated immediately by the physician.

- Blood specimens should not be withdrawn through the IV tubing except in an emergency or when immediate discontinuation of the catheter and tubing is planned.
- Catheter site dressing regimen
- Use a sterile gauze or transparent dressing to cover the insertion site.
- Do not routinely apply antimicrobial ointment to the central venous catheter insertion sites.
- Replace central line catheter site dressings when the device is replaced, when the dressing becomes damp, loosened or soiled or when inspection of the site is necessary. Change dressings more frequently in diaphoretic patients.
- Avoid touch contamination of the catheter insertion site when the dressing is replaced.

Replacement of administration set

- Replace IV tubing, secondary set, add-on devices, and stopcocks **NO MORE FREQUENTLY** than every 72 hours or when clinically indicated, using strict aseptic technique.
- Replace tubing used to administer blood, blood products, or lipid emulsions within 24 hours of initiation of infusion.

Education/training of staff inserting, caring for and/or maintaining central lines

- Staff will receive education and training regarding the insertion, care, and maintenance of central lines upon hire, and annually thereafter. In addition, if job duties change and staff member is assigned the responsibility for insertion, care and maintenance of central lines, education and training will take place as previously stated.

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