Protocol: Line Change Over Guidewire

Purpose:
To describe the procedure for changing a central line over a guideline.

Indications:
As per line change protocol in febrile patient, venous access need based on clinical situation (examples: conversion of cordis to triple lumen catheter, conversion of triple lumen catheter to cordis, changing old central line to new (old TLC changed to new TLC), or the discretion of trauma attending, fellow or senior resident.

Contraindications:
Line sepsis or infection at insertion site.

Procedure:
A. Equipment
   1. obtain appropriate central line catheter insertion kit from Service Center
   2. betadine solution
   3. sterile towels
   4. sterile gown
   5. mask
   6. sterile gloves
   7. 4 x 4 gauze pads
   8. suture removal kit
   9. 2 – 0 or 3 – 0 silk suture
   10. transparent biocclusive dressing

B. Procedure for Line Change Over Guidewire
   1. don mask and gloves
   2. set – up sterile field using central line insertion kit – place sterile towels, sutures, and suture removal kit items onto field maintaining sterile field
   3. remove old central line dressing
   4. prep old central line and site with gauze pads soaked with betadine solution
   5. don sterile gown and two pairs sterile gloves
   6. place sterile drape (from TLC kit) or sterile towels around old central line site
   7. remove sutures from old central line
   8. obtain guidewire from kit and insert into hub of cordis
   9. remove old central line while maintaining control of guidewire at all times, distally during initial removal and then proximally while removing rest of old central line catheter
   10. send old central line intracutaneous segment to lab for gram stain and culture
   11. remove first pair of sterile gloves, leaving second pair of sterile gloves on
12. insert new central line catheter over the guidewire while maintaining constant control of guidewire, proximally during initial insertion, and then distally while inserting new catheter over guidewire into the skin and vessel
13. remove guideline
14. verify adequate blood return
15. aspirate blood into port(s) and then flush port(s) with normal saline flush solution
16. suture new central line to skin using 2 – 0 or 3 – 0 silk
17. apply transparent biocclusive dressing to site
18. write procedure note in patient’s chart documenting: sterile prep and drape of site, new central line inserted (size and type) and old central line removed, sterile technique and modified Seldinger technique used (catheter over guidewire), presence of blood return and ease of saline flush of new central line port(s), patient tolerance of procedure and complications if any

C. NP must perform 5 successful central line changes over guidewire under the direct supervision of a resident/fellow/attending before performing independently. As well, NP must perform at least 10 central line changes over guidewire per year in order to maintain competency.

D. Document procedure on skill check off sheet

References