Repair of Tunneled Silastic Catheters  
(Broviac, Hickman)

“An ounce of prevention is worth a pound of cure”
- Dressing and securement to protect the most vulnerable part of the catheter
- There are a variety of new dressings and securement devices available

Eliminate/minimize risks related to age, developmental level, and diagnosis
- Keep tubes “out of sight, out of mind”
- Prevent pulling and stretching of lines; anchor tubing with tape/securement device
- Position hub/cap away from diapers, ostomies, little hands and mouths

Role modeling for families: children may go home with these lines; families will be responsible for the care at home. Parents watch we do and how we do it. These are teachable moments for families.

System and Organizational Considerations:
Who repairs lines at your facility?
Who repairs lines at other facilities in your community (community standard)?
How do individuals learn the technique and maintain competence?
What are your Organizational Policy/Procedure and Guidelines?
Do your policies incorporate manufacturers’ recommendations and evidence-based guidelines?

Repair process or protocol
Criteria for repair:
- Complete dissection, tear, hole, separation, ballooning
- At least 5cm catheter remaining distal to insertion site
- If double lumen and damage is on adapter leg, at least 2-1/2 cm catheter distal to bifurcation
- LIP order to repair
Critical Elements:

- Timely emergency care when damage discovered (clamp catheter, protect from contamination, try to ensure flushed or heparinized, repair within 24 hours)
- Have and use the correct repair kit for the catheter
- Prevent/detect central line infection and/or bacteremia: blood culture post-repair
- Sterile procedure with at least 2 persons
- Instrument tray or individual additional supplies: sterile bowls, scissors, smooth clamp, drapes or towels

Critical points in the repair procedure:

- Approximation of catheter and repair segment at junction
- Adequate adhesive glue application under sleeve
- Adequate time for adhesive glue to cure (mechanical strength takes 48 hours)
- No use for at least 4 hours
- Splint repair joint for 48 hours to stabilize joint

Documentation:

- Reason for repair
- Information about catheter (date inserted, brand, size)
- Confirm correct repair kit for catheter
- Repair kit reference number, lot number, and expiration date
- Repair completed
- Any problems
- Blood culture obtained
- Post repair instructions for use and care
- Patient tolerance of procedure

Post repair monitoring:

- Patency of line
- Repair site for leakage
- Blood culture results
- Signs/symptoms of infection
- Patient/family or staff education re: dressings and securement
Resources:

Repair Kits for Hickman, Leonard and Broviac Central Venous Catheters: Instructions for Use--Package Insert and available online:


Video repair Broviac catheter (UCSF Benioff Children’s Hospital Oakland):
https://www.youtube.com/watch?v=rM3m5k5AvUk

Video repair Cook Catheter (Arnold Palmer Emergency Department):
https://www.youtube.com/watch?v=bS-ouBiZIDY

References:


