REPAIRING TUNNELLED CUFFED CVC

LOCAL CVAD PROCEDURE ©

To be read in conjunction with SCHN CVAD Practice Guideline Section 4.5

The tunnelled CVC repair kit contains:

- external catheter segment with splice sleeves and clamps
- medical adhesive
- injection caps (these can be discarded)
- 18 gauge blunt needle
- Syringe

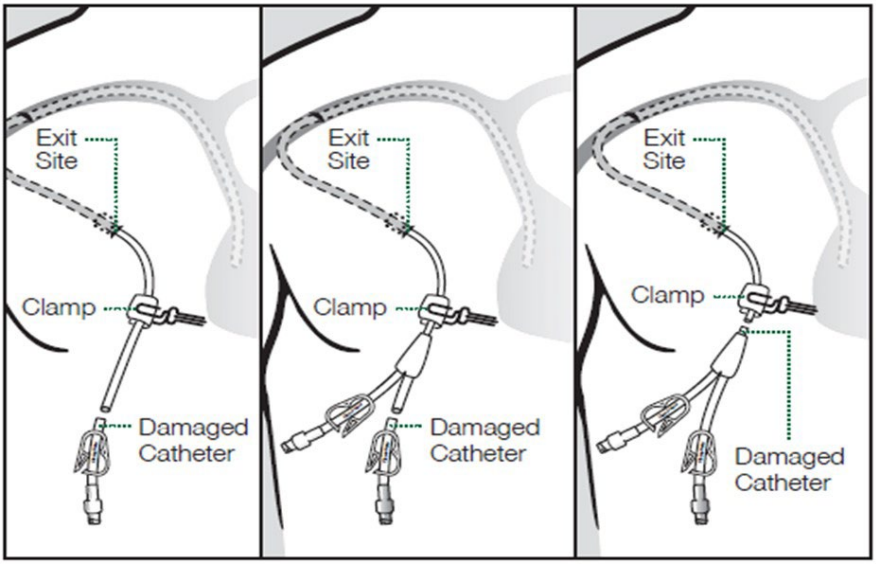
Equipment

- Gather equipment as per Surgical ANTT
- Tunnelled CVC repair kit
- Sterile gloves
- Sterile scissors
- Sterile Clamp
- Sterile drapes
- 2% chlorhexidine gluconate in 70% alcohol swabs (large)
- 10mL luer lock syringe
- sodium chloride 0.9% ampoule, drawing up needle and 10mL syringe (1 per lumen)
- 1x NAD (2x if dual lumen)
- Tape
- Tongue depressor or application sticks
- Lock solution

Note: A second person may be required to assist to maintain surgical asepsis throughout the procedure.

Procedure

Practice Point: Explain the intended procedure to the patient/family/carer and obtain verbal consent.



Single Lumen Repair | **Multi-Lumen Adapter Leg Repair** | **Multi-Lumen External Segment Repair**

1. **Clamp above repair site**.
2. Set up as per Surgical ANTT
3. Perform hand hygiene and don sterile gloves
4. Prepare 10mL sodium chloride 0.9% syringe and lock solution syringe.
5. Attach NAD to replacement lumen/s, prime NAD and replacement lumens with sodium chloride 0.9% and clamp.
6. Gently agitate splice sleeve to check if it can slide with ease.
7. Remove plunger from syringe barrel and inject medical adhesive into syringe barrel, insert plunger and attach blunt needle *(Figure 1)*.

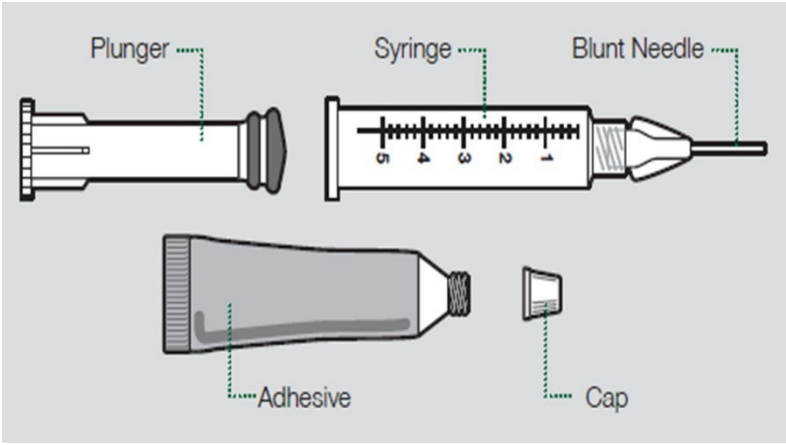


Figure 1

8. Place sterile drape underneath external portion of the tunnelled CVC.
9. Vigorously clean repair site of CVC with 2% chlorhexidine in 70% alcohol swabs.
10. Wrap the lumen in sterile gauze above damaged site and cut external portion of damaged catheter at 90º angle just above damaged site with at least 3-5cm of existing catheter length remaining *(Figure 2)*.

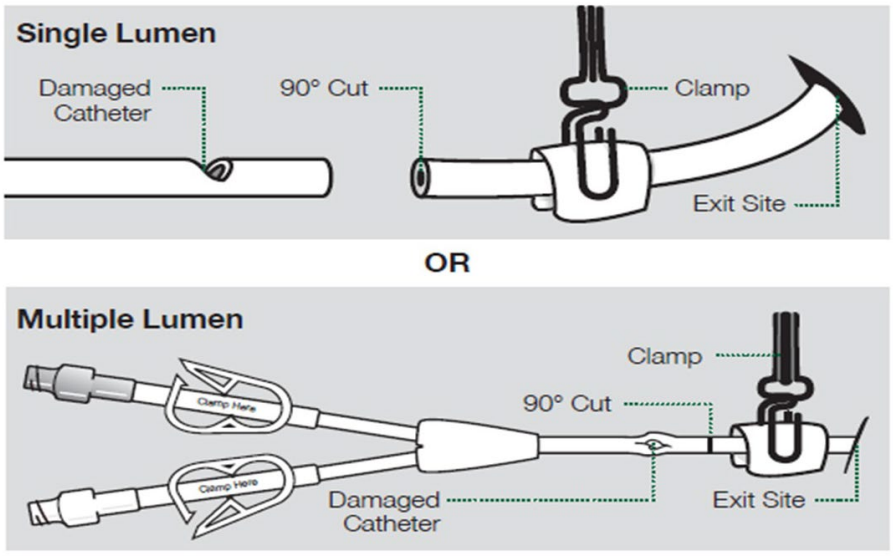


Figure 2

11. Insert the stent of the replacement catheter into the end of the remaining CVC until there is only 3mm between the replacement catheter and the cut end of the CVC *(Figure 3)*.

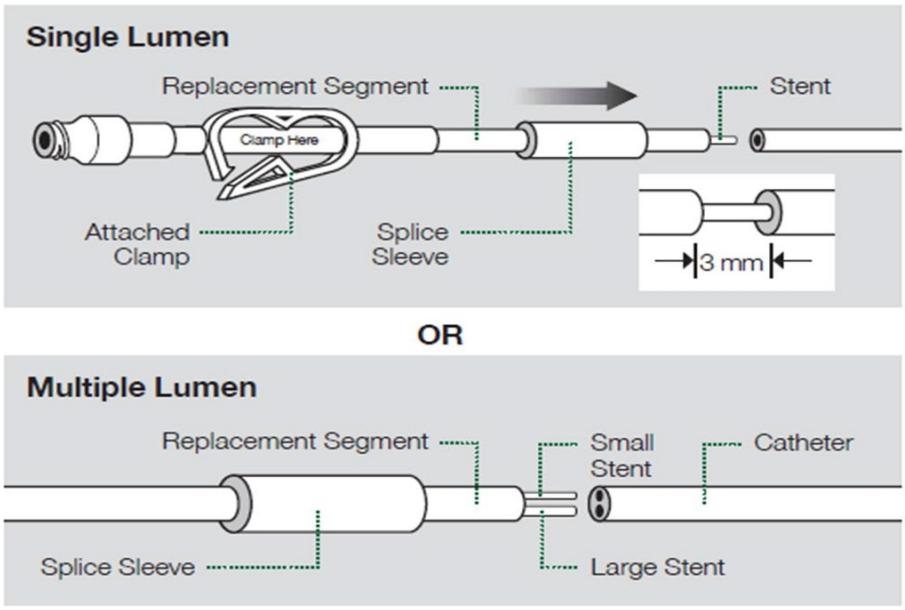


Figure 3

Note: Do not remove the splice sleeve that is on the replacement stent.

Note: For single lumen Broviac© catheter, pull inner tubing from outer sheath 1cm with atraumatic forceps. Insert splice connector stent into inner lumen until catheter segments are together *(Figure 4)*.

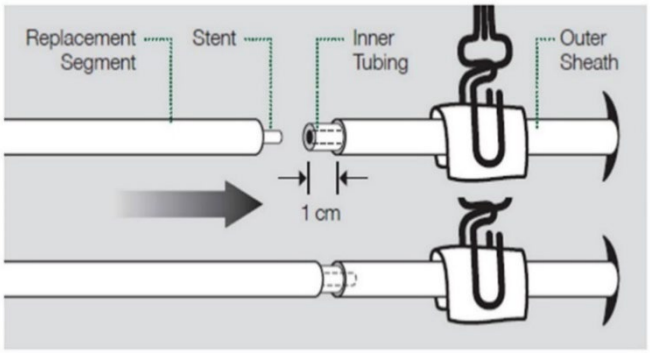


Figure 4

12. Fill the 3mm space with adhesive and push the catheter ends together *(Figure 5)*.

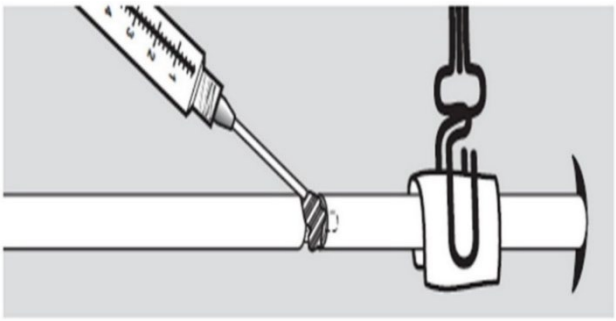


Figure 5.

13. Move the splice sleeve onto the repaired section of tunnelled CVC, ensuring the 3mm space (catheter join) is in the centre of the splice sleeve. Approximately 1-2mm gap will remain between existing catheter and repair segment.

14. Inject the adhesive underneath the entire splice sleeve on both sides *(Figure 6)*. Ensure both ends of the splice sleeve are completely filled with adhesive in order to achieve an adequate seal.

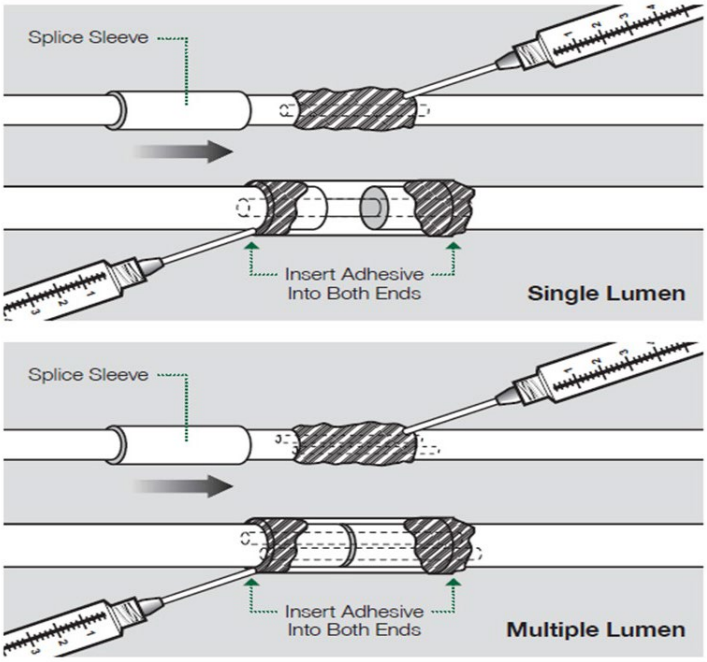
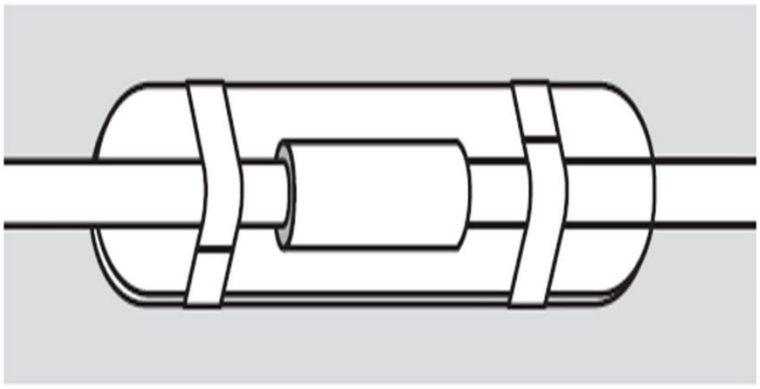


Figure 6.

15. Wipe off any excess adhesive with sterile gauze.
16. Attach a 10mL luer lock syringe to the end of the new segment of tunnelled CVC.
17. Aspirate gently until the blood has reached the tip of the syringe. Ensure there is no leakage of fluid around the repair site.
18. Attach a 10mL luer lock syringe with sodium chloride 0.9% and GENTLY flush the lumen with 5mL and clamp lumen and remove syringe. Ensure there is no leakage of fluid around the repair site.
19. Lock CVC using positive pressure technique.
20. Complete Steps 15 - 18 for additional lumens if required.
21. Splint repaired section of the CVC with the tongue depressor or application sticks. The splint must remain in place for 24 hours and may need to be reinforced with a dressing *(Figure 7)*.

Figure 7.



22. Do not use the repaired CVC for 24 hours.
23. Discard waste in appropriate receptacles and return equipment to designated areas
24. Document in patient's medical record as per minimum documentation requirements in Section 1.6 in CVAD Guideline.

Take a blood sample for a blood culture on first access.

Revision History

Version (date)	Approved by	Amendment notes *(summary of what was changed)*
14th Nov 2023	PPG Committee	Due for mandatory review – no changes made
11th May 2020	PPG Committee	No major practice changes for repairing a CVAD from v5 CVAD Guideline. Now presented in CVAD Local Procedure.