Critical Care Guidelines FOR CRITICAL CARE USE ONLY



Central Venous Catheter (CVC) Removal

Review need for CVC on a daily basis. Early removal decreases risk of infection.

Prior to line removal check patient's clotting and platelet count. Continue with line removal if normal/close to normal. Discuss with medical staff before continuing if deranged.

Equipment

- Sterile dressing pack & sterile gloves
- Alcohol based hand rub
- Stitch cutter
- Sterile Scissors*

- Semi-permeable transparent dressing(i.e Tegaderm)
- Sterile Swabs
- Clinell Skin Wipe (2%Chlorhexidine and 70% alcohol)
- Small sterile specimen container*

Procedure

- 1. Explain procedure to patient.
- 2. Wash hands with soap and water or alcohol based hand rub.
- 3. Place all equipment on dressing trolley and sterile dressing pack.
- 4. Discontinue any infusions and disconnect CVP system from catheter. Clamp all lumens.
- 5. Reposition bed and patient into Trendelenburg position; where the patient is laid flat on their back (supine position) with the feet higher than the head by 15-30 degrees.
- 6. Wash hands with alcohol based hand rub. Loosen old dressing gently.
- 7. Put on clean gloves. Remove old dressing and discard it.
- 8. Remove gloves, wash hands with soap and water or alcohol based hand rub and put on sterile gloves from dressing pack.
- 9. Clean the area with 2% Chlorhexidine in 70% Alcohol wipe.
- 10. Cut and remove the skin suture(s).
- 11. Ask the patient to perform the Valsalva manoeuvre if able or forcibly exhale.
- 12. Cover the insertion site with a sterile swab. Hold the catheter in one hand near the point of insertion and pull firmly and gently. As the catheter begins to move, press firmly down on the site with swabs. Maintain pressure to the area for about 5 minutes after removal of the catheter.
- 13. Check the tip is intact and if there are signs of or suspected infection including redness or pus at the line site, rigours, pyrexia, hypotension or on instruction from the consultant, carefully cut off the tip (approx 5cm) using sterile scissors and place it in a sterile container and send for microbiological investigation.
- 14. If a central line infection is suspected, in addition to the catheter tip being sent, peripheral blood cultures should be taken.

Post-Procedure

- When bleeding has stopped, cover the site immediately with a small gauze swab and a sterile, occlusive, airtight dressing i.e. Tegaderm and date. This must stay in place for 72 hours.
- Dispose of all equipment used and make patient comfortable, lying flat for approximately 30mins.
- Document date, time and reason for removal on Invasive Devices chart.

References

Clark D.C. Plaizier E (2011) Devastating Cerebral Air Embolism After Central Line Removal *Journal of Neuroscience Nursing* 43 (4) 193-196 Dougherty L, Lister S (2011) *Chapter 18 Vascular access devices: insertion and management* in *Royal Marsden Hospital Manual of Clinical Nursing Procedures (Professional Edition, 8th Edition)* Wiley-Blackwell: London

Hamilton H (2006) Complications associated with venous access devices: part one... first of two. *Nursing Standard* 20 (26) 43-51, 53 Royal College Nursing (2010) *Standards for Infusion Therapy (3rd Edition)* RCN: London

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^{*} Required if there are signs of / a suspected infection in order to send the tip for microbiological investigation.