

STANDARDIZED PROCEDURE:

REMOVAL OF TUNNELED CENTRAL VENOUS CATHETER (Adult, Peds)

I. Definition

To remove tunneled central venous access catheters when clinically indicated (e.g. intravenous therapy is complete or catheter malfunction)

II. Background Information

A. Setting: The setting (inpatient vs outpatient) and population (adults vs pediatrics) for the Advanced Health Practitioner (AHP) is determined by the approval of the privileges requested on the AHP Privilege Request Form. If the procedure is being done on a Pediatric patient, make sure Child Life is involved and use age appropriate language and age appropriate developmental needs with care of children, as appropriate to the situation.

B. Supervision: The necessity of this procedure will be determined by the Advanced Health Practitioner in collaboration with the supervising physician or his/her designee. Designee is defined as another attending physician who works directly with the supervising physician and is authorized to supervise the Advanced Health Practitioner. CVC module must be completed prior to performing this procedure.

Direct supervision will not be necessary once competency is determined, as provided for in the procedure. The Advanced Health Practitioner will notify the physician immediately upon being involved in any emergency or resuscitative events or under the following circumstances:

1. Patient decompensation or intolerance to the procedure
2. Bleeding that is not resolved
3. Outcome of the procedure other than expected

C. Indications:

Patient Conditions: Including but not limited to allogeneic bone marrow transplant, leukemia, lymphoma, and oncologic diagnosis such as breast cancer, testicular cancer, lymphoma, and myeloma no longer requiring long-term central venous access (3-24 months) for intravenous medications, transfusions or blood products and chemotherapy.

D. Contraindications:

1. Severe thrombocytopenia (platelet count <50,000)
2. Bleeding disorder, coagulopathy, including patients on anticoagulation therapy.

III. Materials

Central Line Removal Kit and/or Suture Removal kit
4x4 sterile gauze sponges

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- 2x2 sterile gauze sponges
- Small occlusive sterile central line dressing
- Small packet of antibiotic ointment (Neosporin or Bacitracin)

IV. Tunneled Catheter Removal Procedure

A. Pre-treatment Evaluation

1. History: Patient condition and symptoms clinically indicate need for tunneled central venous catheter removal.
2. Patient evaluation: general appearance, vital signs, fever.
3. Diagnostics: Current CBC, platelet count, coagulation profile.

B. Patient Preparation

After providing the purpose, risks (i.e. bleeding, catheter breakage, air embolism), benefits (i.e. catheter removal, decreased risk of infection, and steps of the procedure, obtained informed consent from the patient or appropriate legal designee.

C. Procedure:

1. Assemble supplies
2. Place patient in supine or Trendelenberg position. Perform a time out with all appropriate steps.
3. Prep skin in an aseptic manner with iodine based solution. Put on sterile gloves. Remove sutures if applicable.
4. Instruct patient to perform a valsalva maneuver; hum continuously or hold breath and bear down. Place 4x4 sterile gauze sponges over catheter site and remove the catheter as quickly as possible with one steady motion.
5. Several attempts may need to be made before catheter comes out due to cuff. If tunneled catheter does not come out, reposition angle of pull on catheter slightly, let patient recover and attempt again.. If unable to remove tunneled catheter easily, call surgeon or Interventional Radiology to remove catheter.
6. If tunneled catheter fractures, clamp if possible and call the Attending physician and surgical physician on-call immediately.
7. After removing catheter, apply occlusive dressing using antibiotic ointment. Apply pressure for at least 2-3 minutes or until bleeding stops. Make sure dressing is occlusive before raising patient to sitting position.
8. Inspect catheter to make sure catheter was removed intact, including cuff, and send tip for culture if clinically indicated.

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D. Post-procedure

1. Check site after 15 minutes for subcutaneous bleeding or swelling. If air embolism is suspected place patient in Trendelenberg position on left side and call physician immediately.
2. Instruct patient to leave dressing intact for 24 hours. Instruct patient to call the clinic or physician on call for any bleeding or signs/symptoms of infection.

E. Documentation

Documentation is in the electronic medical record

1. Documentation of the pretreatment evaluation and any abnormal physical findings.
2. Record the time out, indication for the procedure, procedure, type and size of catheter removed, EBL, the outcome, how the patient tolerated the procedure, medications (drug, dose, route, & time) given, complications, and the plan in the note, as well as any teaching and discharge instructions.

VI. Competency Assessment

A. Initial Competence

1. The Advanced Health Practitioner will be instructed on the efficacy and the indications of this therapy and demonstrate understanding of such.
2. The Advanced Health Practitioner will demonstrate knowledge of the following:
 - a. Medical indication and contraindications of removal of tunneled central venous catheter.
 - b. Risks and benefits of the procedure
 - c. Related anatomy and physiology
 - d. Consent process (if applicable)
 - e. Steps in performing the procedure
 - f. Documentation of the procedure
 - g. Ability to interpret results and implications in management.
3. Online CVC module must be completed prior to performing this procedure. Advanced Health Practitioner will observe the supervising physician perform each procedure three times and perform the procedure **three** times under supervision.

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4. Supervising physician will document Advanced Health Practitioner's competency prior to performing procedure without supervision.
5. The Advanced Health Practitioner will ensure the completion of competency sign off documents and provide a copy for filing in their personnel file and a copy to the medical staff office for their credentialing file.

B. Continued proficiency

1. The Advanced Health Practitioner will demonstrate competence by successful completion of the initial competency.
2. Each candidate will be initially proctored and signed off by an attending physician. Advanced Health Practitioner must perform this procedure at least **three** times per year. In cases where this minimum is not met, the attending, must again sign off the procedure for the Advanced Health Practitioner. The Advanced Health Practitioner will be signed off after demonstrating 100% accuracy in completing the procedure.
3. Demonstration of continued proficiency shall be monitored through the annual evaluation.
4. A clinical practice outcomes log is to be submitted with each renewal of credentials. It will include the number of procedures performed per year and any adverse outcomes. If an adverse outcome occurred, a copy of the procedure note will be submitted.

VII. RESPONSIBILITY

Questions about this procedure should be directed to the Chief Nursing and Patient Care Services Officer at 353-4380.

VIII. HISTORY OF PROCEDURE

Revised March 2012 by Subcommittee of the Committee for Interdisciplinary Practice

Reviewed March 2012 by the Committee on Interdisciplinary Practice

Prior revision October 2008

Approved March 2012 by the Executive Medical Board and the Governance Advisory Council.

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