STANDARDIZED PROCEDURE
TRANSTHORACIC LINE REMOVAL (Adult, Neonatal, Peds)

I. Definition

The purpose of this procedure is to allow the Advanced Health Practitioner (AHP) to remove transthoracic lines. Transthoracic lines are used to monitor intracardiac pressures (Left atrium- LA, Right Atrium – RA, Pulmonary Artery – PA) in the initial post-operative period. The removal of the lines is necessary for the patient to progress in their recovery.

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 Services 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 protocol will be determined by the AHP 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 AHP.

Direct supervision will not be necessary once competency is determined, as provided for in the protocol. The AHP 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: Transthoracic lines will usually be removed on post-op day #4. The decision to remove lines earlier will be made by the Cardiothoracic team on morning rounds.

D. Precautions / Contraindications: Precautions include having blood at the bedside in a cooler. Contraindications include: if the patient has no other IV access.

III. Materials

1. 11 scalpel blades
2. Sterile Gloves
3. 4x4 gauze

IV. Procedure

A. Pre-treatment evaluation: The AHP will check to make sure that the patient's platelet level, PT, PTT and Fib are within normal limits before removing the line.

B. Set up: Blood in a cooler at the bedside or one unit available for this patient in the blood bank.

C. Prepare patient:

1. Remove dressing from around the line.
2. Medicate for pain as needed.
3. Explain to family and, if age appropriate, explain the procedure to the patient and or family.

D. Perform procedure:

1. If more than one line is to be removed; remove each line separately and wait at least 4 hours between line pulls.
2. Remove sutures from line anchor.
3. Wait for pressures to return to baseline levels.
4. Pull line with smooth continuous pressure.

E. Post-procedure: Watch for bleeding. Remain at bedside until any bleeding has stopped. Instruct bedside nurse to watch for signs of tamponade in hemodynamic instability. Patient should remain quiet for at least 1 hour after line removal.

F. Follow-up treatment: If excessive bleeding occurs check CBC and treat if necessary. If patient becomes hemodynamically unstable, notify the ICU Attending and the Cardiothoracic surgery team.

V. Documentation

A. 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, method used, EBL, the outcome, how the patient tolerated the procedure, medications (drug, dose, route, & time) given, complications, and the plan in the note.

B. All abnormal findings are reviewed with supervising physician.

VI. Competency Assessment

A. Initial Competence

1. The AHP will be instructed on the efficacy and the indications of this therapy and demonstrate understanding of such.
2. The AHP will demonstrate knowledge of the following:
   a. Medical indication and contraindications of transthoracic line removal.
   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. AHP will observe the supervising physician perform each procedure three times and perform the procedure **three** times under direct supervision.

4. Supervising physician will document AHP's competency prior to performing procedure without direct supervision.

5. The AHP 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 AHP will demonstrate competence by successful completion of the initial competency.

2. Each candidate will be initially proctored and signed off by an attending physician. AHP 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 AHP. The AHP 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 POLICY

Revised Oct 2012 by Subcommittee of the Committee for Interdisciplinary Practice
Reviewed Oct 2012 by the Committee on Interdisciplinary Practice
Prior revision Nov 2008
Approved Oct 2012 by the Executive Medical Board and the Governance Advisory Council.

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