

## HOSPITAL

### DEPARTMENTAL PROCEDURE

#### TITLE: TRAUMA: PERICARDIOCENTESIS

Date Adopted: XX

Supersedes:

Date Revised: XX

Date Reviewed: XX

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#### DISTRIBUTION:

Nursing

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#### STAFF LEVEL:

RN, GN, LVN, GVN

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#### PROCEDURE:

##### Indication

1. To remove an abnormal collection of fluid from the pericardial sac. The acute collection of fluid (>50 and < 250) can result in low cardiac filling and/or cardiac tamponade.
2. Signs and symptoms may include tachycardia, tachypnea, rales, cyanosis impaired cerebral/renal function, hypotension, Jugular Venous Distention (JVD)
3. The diagnosis of pericardial tamponade is based on patient symptomatology and mechanism of injury along with chest x-ray or 2D echo

##### Equipment

- Needle spinal 18 G x 3'
- Sterile 50, 10, 5 and 3 cc syringes
- Sterile alligator clip cable
- 3 way stopcock
- cardiac monitor
- Sterile gloves, gown, mask and towels
- Surgical prep solution
- 1% Lidocaine
- Flutter valve apparatus

##### Procedure (DIAGRAM TO FOLLOW)

1. Place patient with head of bed 30-45 degrees.
2. Sedate patient if ordered.
3. Place patient on cardiac monitor. Connect 16 or 18G 3" (spinal) needle to 3-way stopcock and 50ml syringe. Connect alligator clip to needle and V lead of EKG monitor.
4. Cleanse area with surgical prep solution in circular motion.
5. Physician will inject 1% Lidocaine to anesthetize the area.

6. Physician inserts needle 1-2 cm inferior to the left of the xiphochondral junction, at a 45 degree angle to the skin while aspirating with syringe until fluid is returned. The needle will be advanced cephalad and aim toward the top of the left scapula. If needle advances to the ventricle, ST depression will appear on the monitor. If the needle touches the atrium there will be PR elevation.
7. If indwelling catheter is placed (for large effusion), place stopcock and connect to sterile drainage bag.
8. Once needle is removed cleanse area; samples may be sent to lab for evaluation.

#### Nursing Assessment

1. Continuously monitor EKG, BP, heart/lung sounds and pulse ox if available. Record vital signs per policy.
2. Stat chest x-ray to rule out hemo/pneumothorax.
3. Echo if ordered.
4. Monitor site for signs and symptoms of bleeding.
5. Prepare for possible surgery.

#### Complications

1. Cardiac dysrhythmias, PR elevation, ST depression
2. Pnuemo/hemothorax
3. Pericardial effusion/tamponade due to puncture of ventricle/atrium
4. Infection

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#### **REFERENCES:**

American Association of Critical Care Nurses, *AACN Procedure Manual for Critical Care*, 2010, Sixth Edition, W.B. Saunders Company, Philadelphia, Pennsylvania.

American College of Surgeons, *Advanced Trauma Life Support*, 2014, Seventh Edition, Chicago, Illinois.

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#### **SIGNATURES:**

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