

## POST-CARDIAC CATHETERIZATION/PTCI – ICU, Progressive Care Unit/ Cath Lab & Recovery Room

PURPOSE:	To outline the management of all patients pre and post cardiac catheterization or percutaneous transluminal coronary intervention (PTCI).
SUPPORTIVE DATA:	<p>Cardiac catheterization/coronary angiography are diagnostic tests used to evaluate the heart and determine patency of coronary arteries.</p> <p>They also help evaluate heart valve and muscle function. PTCI is an invasive cardiovascular procedure used to decrease atherosclerotic obstruction and myocardial ischemia. Following the procedure, patients are assessed for vascular complications, renal insufficiency, heart failure and neurologic symptoms.</p> <p>The cardiac fellow reviews the activated clotting time (ACT) level prior to removing the arterial sheath. Only physicians (cardiac fellows) may remove the arterial sheath. Nurses may remove the venous sheath.</p>
PRE-PROCEDURE ASSESSMENT:	<p>1. Assess the following prior to procedure:</p> <ul style="list-style-type: none"> <li>• Allergies</li> <li>• Vital signs (VS)</li> <li>• Radial/femoral and distal lower extremity pulses</li> <li>• Arm/Leg motor strength</li> <li>• Peripheral perfusion including: <ul style="list-style-type: none"> <li>- Skin color, temperature</li> <li>- Capillary refill</li> <li>- Presence/absence of lesions</li> </ul> </li> <li>• Signs &amp; Symptoms (S/S) of volume overload <ul style="list-style-type: none"> <li>- Rales, shortness of breath</li> <li>- Jugular venous distension (JVD)</li> </ul> </li> <li>• Lab values - [complete blood count (CBC) including platelet count, creatinine, electrolytes, INR, activated partial thromboplastin time (aPTT)]</li> </ul>
PRE-PROCEDURE MANAGEMENT:	<p>2. Complete pre-operative checklist</p> <p>3. Place indwelling bladder catheter as ordered or condom catheter.</p> <p>4. Use clippers to remove hair from bilateral groin areas.</p> <p>5. Ensure patient has 2 patent intravenous (IV) lines (20 gauge or larger).</p>
POST-PROCEDURE ASSESSMENT:	<p>6. Assess for late signs of allergic reaction to contrast immediately upon return from cardiac cath lab then for first hour.</p> <p>7. Assess the following:</p> <ul style="list-style-type: none"> <li>• Immediately upon patient return from procedure and every 15 minutes for the first hour, then every 30 minutes for the second hour, then every hour until sheath is removed: <ul style="list-style-type: none"> <li>- VS</li> <li>- Level of consciousness</li> <li>- Cardiac rhythm</li> <li>- Radial/Femoral &amp; lower extremity pulses</li> <li>- Catheter, arteriovenous (AV) sheath</li> <li>- Catheterization access site for presence/absence of bleeding/hematoma</li> </ul> </li> <li>• After sheath removal, every 15 minutes for the first hour, every 30 minutes for the second hour then per Physiologic Monitoring/Hygiene/Comfort – ICU, Progressive Care Unit Standard: <ul style="list-style-type: none"> <li>- VS</li> <li>- Level of consciousness</li> <li>- Cardiac rhythm</li> </ul> </li> </ul>

- Radial/Femoral & distal lower extremity pulses
- Catheterization access site for presence/absence of bleeding/hematoma

8. Obtain stat 12-lead ECG as ordered.
9. Measure urine output hourly x4 then per Physiologic Monitoring/Hygiene/Comfort – ICU, Progressive Care Unit Standard.
10. Assess for signs of reocclusion a minimum of every hour:
  - Chest pain, back pain, abdominal pain
  - Nausea/vomiting
  - ECG changes, dysrhythmias
11. Assess for signs/symptoms of fluid overload a minimum of every 4 hours
12. Monitor CBC, platelet count, creatinine, electrolytes, INR, aPTT as drawn.

**REOCCCLUSION  
MANAGEMENT:**

13. Obtain 12 lead ECG, notify provider immediately.
14. Prepare patient for possible return to cardiac cath lab.

**AV SHEATH:**

15. Connect AV sheath ports (if present) to continuous flush device as ordered:
  - Arterial port: Attach to transducer with heparinized saline or saline flush solution and pressure bag at 300 mmHg. Attach transducer to monitor
  - Venous port: Attach to continuous flush device (e.g. Sorenson) with heparinized-saline or saline flush and pressure bag @ 300mmHg
  - Ensure tubing ports are covered with non-infusible caps so that they are not used

**SAFETY:**

16. Maintain bedrest for at least 6 hours or as ordered. Patients receiving a vascular closure device can ambulate after 4 hours.
17. Maintain head of bed (HOB) no higher than 30 degrees as ordered.
18. Keep affected extremity straight for 6 hours or as ordered.

**DISCONTINUATION  
OF VENOUS  
SHEATH:**

19. Apply manual pressure to catheter site for 5-10 minutes upon removal of venous sheath (unless Femostop™ device is used).

**REPORTABLE  
CONDITIONS:**

20. Notify the provider for:
  - Signs of volume overload, allergic reaction
  - Deterioration in pulses, extension of hematoma
  - Signs of neurovascular dysfunction
  - Deterioration in mobility
  - Bleeding, abnormal Hct/coagulation values
  - Chest pain, back pain, abdominal pain
  - Tachycardia
  - Urine output (UOP) < 30 mL/hr for 2 consecutive hours

**ADDITIONAL  
STANDARDS:**

21. Refer to the following as indicated:
  - Arterial Line- ICU
  - Chest pain
  - Immobility
  - Femoral Compression System (Femostop™)
  - TR band radial compression device (TR Band™ – ICU/Progressive Care Unit/ Cath Lab & Recovery Room)
  - Pain Management

**DOCUMENTATION:**

22. Document in accordance with documentation standards in iView

Initial date approved: 11/94	Reviewed and approved by: Professional Practice Committee Nurse Executive Council Attending Staff Association Executive Committee	Revision Date: 11/00, 03/05, 08/15, 11/18
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