**ICU Impella CP Nursing Protocol**

1. Examine insertion site for bleeding or hematoma
2. Measure thigh diameter and document
3. Document Impella catheter lock location
4. Document P-level, Purge flow, and Impella flow
5. Review Impella Placement and motor current waveform

**Contraindication for anticoagulation?**
- Yes
  - Notify CCM MD
- No
  - 1. Change Purge fluid to Heparin Purge solution
  - 2. Start systemic heparin infusion with goal AntiXa between 0.30-0.60 Int unit/mL

**Vasopressors weaned off?**
- Yes
  - - Titrate Vasopressors
  - - Calculate and document PAPi and CPO q6h
  - - Goal CPO > 0.6 w
- No
  - Continue monitoring per ICU protocol

**Decision to remove Impella?**
- Yes
  - - Reduce P-level by 2 level increments every 30 minutes until P-2 is reached
  - - No
  - - Patient hemodynamically stable?
     - Yes
       - 1. Stop systemic heparin infusion
       - 2. Change purge solution to D5%W
       - 3. Check ACT one hour after above
     - No
       - ACT <150s?
         - Yes
           - 1. Notify CCM MD
           - 2. Prepare for Impella removal
         - No
           - Recheck ACT in 2 hours

- No
  - Continue monitoring per ICU protocol

**Hemostasis achieved?**
- Yes
  - Follow arterial sheath removal protocol
- No
  - 1. Notify CCM MD

**Impella to be removed by MD**
- Yes
  - 1. Notify CCM MD
  - 2. Prepare for Impella removal
- No
  - Hold pressure for 40 minutes

**Formulae**
- \( PAPi = \frac{PA_{sys} - PA_{dia}}{RA_{mean}} \)
- \( CPO = \frac{MAP \times CO}{451} \)

**Abbreviations**
- CCM: Critical Care Medicine
- ACT: Activated clotting time
- PAPi: Pulmonary artery pulsatility index
- CPO: Cardiac power output
- MAP: Mean arterial pressure
- CO: Cardiac output

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