**Evaluate a Peri-Operative Amiodarone Dosing Protocol on the Rates of Post-Surgical Atrial Fibrillation**

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**BACKGROUND**

- Post-operative atrial fibrillation is an atrial arrhythmia with irregularly irregular R-R periods and without distinct P waves which occurs after a cardiac surgery.
- Despite treatment with standard of care including beta-blockers, rates of post-operative atrial fibrillation (POAF) range from 20% for CABG to over 50% for interventions including CABG + valve repair.
- The pathogenesis of POAF is poorly understood with baseline predispositions of age, atrial size, and obesity all thought to play a role. In the peri-operative setting, atrial injury, acute volume changes, and excess catecholamine use may lead to POAF.
- Recent studies have shown a reduction in the rates of POAF with peri-operative administration of amiodarone although there was a subsequent increase in rates of bradycardia.

**PURPOSE**

- Evaluate the safety and efficacy profile of a newly initiated peri-operative amiodarone dosing protocol.
- Use population specific data to shape the management of post-operative atrial fibrillation at a 433-bed community hospital.

**OUTCOMES**

- Primary Outcome
  - Rates of post-operative atrial fibrillation
- Secondary Outcomes
  - Hospital & ICU LOS
  - Postoperative LOS
  - Total hospital stay cost
  - In hospital mortality
  - Requirement of intra-aortic balloon pump
  - Vasoactive substance requirement
  - Frequency of required pacing

**METHODS**

- **POAF Protocol**
  - **Inclusion Criteria**
    - Age >18
    - Intraoperative Amiodarone naïve
  - **Exclusion Criteria**
    - Pre-operative Amiodarone
    - Amiodarone or Iodine allergy
    - SBP <80mmHg in previous 24 hours
    - Brady cardia <60BPM, QTc >480msec, 3rd degree heart block
    - Duration of surgery >300 minutes
  - **POAF Incidence**
    - If no POAF occurs : no amiodarone upon discharge
    - If POAF does occur : amiodarone 200mg PO daily for 1 month
    - If POAF does occur : amiodarone 200mg PO daily for 1 month
  - **Data Collection**
    - Data will be collected through a review of electronic medical records using Cerner PowerChart
    - Patient identifiers will be removed from all data to protect patient confidentiality.

**SHI PERI-OPERATIVE AMIODARONE PROTOCOL**

<table>
<thead>
<tr>
<th>Pre-operative</th>
<th>Post-operative – Begin evening of surgery or POD1 if surgery ends after 1500</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-6 days prior to surgery</td>
<td>If cardiovascular surgery is planned 4-6 days ahead in current stay, begin amiodarone at next scheduled administration time based on frequency</td>
</tr>
<tr>
<td>If cardiovascular surgery is planned 4-6 days ahead in current stay, begin amiodarone at next scheduled administration time based on frequency</td>
<td>If no nausea: 400mg PO BID</td>
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<tr>
<td>(If nausea: 200mg PO BID)</td>
<td>If nausea is persistent with zofran: No oral amiodarone</td>
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<tr>
<td>Oral Dose: 400mg TID</td>
<td>IV Dose: 1mg IV: 2mg PO. 150mg Bolus; 1mg/min for 6 hours; 0.5mg/min thereafter</td>
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<tr>
<td>Pre-operative – Day of surgery</td>
<td>IV dosing – if NP: Ensure good IV access to prevent extravasation; 0.5mg/min</td>
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<tr>
<td>Amiodarone 600mg PO as a single dose</td>
<td>Upon discharge</td>
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<tr>
<td>If Beta-blocker naïve: metoprolol tartrate 12.5mg PO; single dose</td>
<td>If no POAF occurs : no amiodarone upon discharge</td>
</tr>
<tr>
<td>If NOT Beta blocker naïve: metoprolol tartrate 25mg PO (or home Beta blocker), single dose</td>
<td>If POAF does occur : amiodarone 200mg PO daily for 1 month</td>
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<tr>
<td>Intra-operatively – No medications as part of protocol</td>
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**DISCLOSURES**

- Authors of this presentation have no financial disclosures concerning potential financial or personal relationships with commercial enterprises that may have a direct or indirect interest in the subject matter of this presentation.

**REFERENCES**