

# **POLICY STATEMENT AND PROCEDURAL GUIDELINES SUBJECT: AMI Administration of CCTA medications and CCTA protocols.**

REVIEWED: March 2021 REVISED: September 2016 REVISED: September 2018 REVISED: March 2021

**PURPOSE:** To provide consistent protocols that will be utilized during Coronary Computed Tomography Angiography (CCTA) studies at each location throughout Atlantic Medical Imaging. To obtain high quality CCTA images, while ensuring the safety of our patients.

**POLICY:** It is the policy of AMI to utilize a standardized protocol for CCTA studies, including the screening and preparation of patients. This includes the monitoring of the patient throughout their visit and the administration of CCTA medications as deemed necessary.

## **PROCEDURE:**

Patients scheduled for a Coronary CTA exam at Atlantic Medical Imaging will be screened by nursing staff for possible contraindications. Nursing staff will assess each patient prior to the exam. This process can begin with a prescreening phone call prior to the day of the study. Typical medications used at AMI during a Coronary CTA exam include Lopressor (Metoprolol Tartrate) and Nitroglycerin. They are dispensed and administered by a registered nurse (RN) upon written order from a Radiologist in compliance with AMI policy PC800.

1. Referring physicians are provided with CCTA educational packets to distribute to patients when they prescribe this exam. This packet includes pre-arrival paperwork and instructions.
2. All patients are encouraged to arrive one hour prior to their study to begin the screening process. The nurse will review with the patient the patient questionnaire which is included in the Coronary CTA Instruction package.
3. The nurse will review the prescription and all completed forms prior to beginning the screening process or dispensing any medication.
4. The Registered Nurse will assess the patient & appropriately document the following:
  - Resting heart rate to include rhythm strip
  - Vital Signs prior to and following medications and interventions
  - Medical history
  - Current medication list (to include any meds & dose taken prior to exam)
  - Allergy information
  - Comfort measures provided throughout the exam to the patient for optimal HR
  - Medications Administered
5. All information obtained will be provided to the radiologist who will sign a written order for all medications. The target heart rate for the exam is 55-60bpm sustained.
6. Detailed instructions and educational information regarding beta blockers will be provided prior to the Lopressor administration and all questions and concerns will be addressed.
7. The registered nurse/tech will speak with the reading radiologist regarding on a case-by-case basis prior to cancelling a patient to determine how to proceed with the patient's exam.

## **Potential contraindications to Beta Blockers include:**

Although unlikely, beta blockers may exacerbate bronchospastic disease. Patients with a known history of asthma, COPD, or active bronchospasm, should be monitored closely throughout exam and medication process. Any acute symptoms should be reported to the patient's physician prior to medication administration of beta blockers.

## **Beta blockers should not be administered if**

- Heart Rate <55bpm
- Systolic blood pressure is less than or equal to 100mmHg.
- Allergy or sensitivity to Beta Blockers

- Sinus bradycardia, second- or third-degree AV Block
- Symptomatic hypotension occurs.

**Medication administration guidelines for Lopressor are as followed:**

1. Lopressor 50mg PO x1 dose can be given for a resting heart rate of 60-65bpm.
2. Lopressor 100mg PO can be given for a resting heart rate greater than 65bpm.
3. The total combined amount of Lopressor for any given patient will not exceed 300mgs, including any doses taken prior to arrival unless otherwise directed by the radiologist.

***\*Patients exhibiting a continued heart rate elevation after beta blockade in the BHP location should be evaluated on a case-by-case basis. These patients may be scanned if their heart rate is maintained at 70bpm or less, with no more than 5bpm variation. A radiologist should be consulted for patients with a heart rate of 70bpm or higher.***

**Nitroglycerin SL tablets will be administered during the exam for vasodilatation.**

- The dose of nitroglycerin will be dependent on patient BP. If within parameter range, it is preferred to administer 800mcg nitroglycerin.
  - > 110 systolic BP administer 800mcg
  - 90-110 systolic BP administer 400mcg
  - < 90 systolic BP— hold nitroglycerin
- The nurse will assess for possible contraindications to nitroglycerin prior to administering. If no contraindications exist, Nitroglycerin tablets will be administered after the patient is placed on the CT table & attached to the cardiac monitored.
- Nurse should ensure dissolving of tablets 7-10 minutes prior to contrast administration.
  - If tablets are not dissolved, saline/water can be given to patient to facilitate dissolving.
- If the patient requires re-injection within 20 minutes of original dose, no further nitroglycerin is required. However, if longer than 20 minutes has elapsed following initial dose of nitroglycerin, nurse should reevaluate patient BP and a second dose of 400mcg should be administered. Continue to allow 7-10 minutes for tablets to dissolve prior to contrast administration.
- Following completion of a successful exam, a full reassessment of patient should occur & be documented including:
  - Full set of vital signs
  - Any patient status change and disposition
  - Removal of IV & cardiac monitor leads

**References:**

[https://cdn.ymaws.com/scct.org/resource/resmgr/SCCT\\_guidelines\\_for\\_the\\_perf.pdf](https://cdn.ymaws.com/scct.org/resource/resmgr/SCCT_guidelines_for_the_perf.pdf)

**Associated Documents:**

[Coronary CTA-Cardiac Morph Nursing Database with cardiac score 12-15.docx](#) (view in Reading View)