Guidelines for In-Patient Cardiac CTA

Admin Approval: 6/1/2020
Next Review: 6/2022

Division/Champion: Cardiothoracic Imaging/ Blum/Winchester

Subject: Guidelines for In-Patient Cardiac CTA

Purpose: Indications and preparation of an inpatient scheduled for a cardiac CTA

Policy: As these are typically non-emergent exams and the expertise required to perform the imaging and interpret the study, inpatient Cardiac CTA are typically only performed between the hours of 8AM – 5PM on weekdays and weekend days.

Criteria for Cardiac CTA

Patient felt to be low to intermediate pretest likelihood of having coronary ischemia as a cause of their chest pain.

Appropriate Indications for Cardiac CTA

Chest pain in low to intermediate risk patient.

Patient with possible structural non-atherosclerotic cardiac anomaly.

Absolute Contraindications for Cardiac CTA

- Clinical instability
- Inability to follow directions, hold breath, lie flat and still, or cooperate
- Increased cardiac enzymes, concerning for AMI
- Acute EKG changes, suggesting AMI
- Documented history of severe coronary atherosclerosis (stents, bypass)
- Irregular cardiac rhythm
- Pregnancy
- History of severe contrast reaction (anaphylaxis, respiratory/cardiovascular collapse requiring vasopressors/intubation)
Relative Contraindications for Cardiac CTA

- Age <40 (unless concern for coronary anomaly) or Age > 75 (more likely to have significant calcific disease, especially males)
- Creatinine level > 2.0, if not on chronic dialysis. Creatinine levels greater than 2.0 must be discussed on a case by case basis with radiologist based on risk/benefit to patient.
- History of less severe contrast reactions which are safe for premedication (itching, hives, bronchospasm, hypotension not requiring vasopressors or mechanical ventilation)
- Body Mass Index > 50 kg/m²
- Coronary CTA performed within the last year

IV Access (Please see IV Access Guidelines)

Must support injection rates at least 5 cc/sec
18g preferred, 20g min
Order of location preference: 1. Right AC; 2. Right mid forearm; 3. Left AC; 4. Left mid forearm.
*CT-rated (>300 PSI) central venous lines are acceptable.

All other locations, such as external jugular or hand veins are unacceptable for contrast bolus delivery for cardiac CTA. Other lines or catheters must be approved by the Cardiac Imaging Team or the radiologist/resident on call.

Cardiac CTA Orders Weekdays: Monday through Friday; 8AM – 5PM

- Cardiac CTA EPIC orderable: CT Angio Cardiac Coronary Arteries IMG 12017
- Radiology will place orders in EPIC for IV metoprolol and sublingual nitroglycerine.
- The in-patient scheduled for cardiac CTA is managed by radiology nursing staff.

Medication Administration: Radiology Nursing

- Beta blocker: IV metoprolol: up to 4 doses, 5mg each
- Administered by radiology staff RN just prior to scan until target rate of 66 bpm is met.
- Sublingual nitroglycerine: 0.4mg (unless patient has used Viagra, Cialis, or Levitra in last 3 days)
- Administered by radiology staff RN 3-6 minutes prior to contrasted scan.

Reporting of Results:

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<thead>
<tr>
<th>WEEKDAYS</th>
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<tbody>
<tr>
<td>0800-1700</td>
<td>Final report in EPIC by 6PM.</td>
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<tr>
<td>1700-0800</td>
<td>Final report in EPIC by 9AM the following morning.</td>
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<th>WEEKENDS</th>
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<tr>
<td>0800-0800</td>
<td>All studies performed before noon on Saturday and Sunday will have a final read in EPIC by early afternoon. Studies performed after noon will have final reads by Sunday early afternoon (Saturday PM studies) or Monday AM (Sunday PM studies).</td>
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