



Chest Pain: Cardiac and STEMI

History

- Age
- Medications (Viagra / sildenafil, Levitra / vardenafil, Cialis / tadalafil)
- Past medical history (MI, Angina, Diabetes, post menopausal)
- Allergies
- Recent physical exertion
- Palliation / Provocation
- Quality (crampy, constant, sharp, dull, etc.)
- Region / Radiation / Referred
- Severity (1-10)
- Time (onset / duration / repetition)

Signs and Symptoms

- CP (pain, pressure, aching, vice-like tightness)
- Location (substernal, epigastric, arm, jaw, neck, shoulder)
- Radiation of pain
- Pale, diaphoresis
- Shortness of breath
- Nausea, vomiting, dizziness
- **Time of Onset**
- Women:
 - More likely to have dyspnea, N/V, weakness, back or jaw pain

Differential

- Trauma vs. Medical
- Angina vs. Myocardial infarction
- Pericarditis
- Pulmonary embolism
- Asthma / COPD
- Pneumothorax
- Aortic dissection or aneurysm
- GE reflux or Hiatal hernia
- Esophageal spasm
- Chest wall injury or pain
- Pleural pain
- Overdose: Cocaine or Methamphetamine

B	12 Lead ECG Procedure
	Aspirin 81 mg x 4 PO (chewed) Or 325 mg PO
P	Nitroglycerin 0.3 / 0.4 mg Sublingual Repeat every 5 minutes x 3 <i>if prescribed to patient and (BP ≥ 100)</i>
	Cardiac Monitor

Acute MI / STEMI
(STEMI = 1 mm ST Segment
Elevation ≥ 2 Contiguous Leads)

NO

A	IV / IO Procedure
A	Nitroglycerin 0.3 / 0.4 mg SL Repeat every 5 minutes as needed
P	
Hypotension / Shock Protocol AM 5 <i>if indicated</i>	
CHF / Pulmonary Edema Protocol AC 5 <i>if indicated</i>	

Transport based on:
STEMI
EMS Triage and Destination Plan
Immediate Notification of Facility
Immediate Transmission of ECG
if capable
Keep Scene Time to ≤ 10 Minutes

B	<i>If transporting to Non PCI Center</i> Reperfusion Checklist
P	

**Notify Destination or
Contact Medical Control**

Adult Cardiac Protocol Section



Chest Pain: Cardiac and STEMI

Pearls

- **Recommended Exam: Mental Status, Skin, Neck, Lung, Heart, Abdomen, Back, Extremities, Neuro**
- **Items in Red Text are the key performance indicators for the EMS Acute Cardiac (STEMI) Care Toolkit**
- **Avoid Nitroglycerin in any patient who has used Viagra (sildenafil) or Levitra (vardenafil) in the past 24 hours or Cialis (tadalafil) in the past 36 hours due to potential severe hypotension.**
- **STEMI (ST-Elevation Myocardial Infarction)**
 - **Positive Reperfusion Checklist should be transported to the appropriate facility based on STEMI EMS Triage and Destination Plan.**
 - **Consider placing 2 IV sites in the left arm: Many PTCL centers use the right radial vein for intervention.**
 - **Consider placing defibrillator pads on patient as a precaution.**
 - **Consider Normal Saline or Lactated Ringers bolus of 250 – 500 mL as pre-cath hydration.**
- **If CHF / Cardiogenic shock resulting from inferior MI (II, III, aVF), consider Right Sided ECG (V3 or V4). If ST elevation noted Nitroglycerin and / or opioids may cause hypotension requiring normal saline boluses.**
- **If patient has taken nitroglycerin without relief, consider potency of the medication.**
- **Monitor for hypotension after administration of nitroglycerin and narcotics (Morphine, Fentanyl, or Dilaudid).**
- **Diabetic, geriatric and female patients often have atypical pain, or only generalized complaints.**
- **Document the time of the 12-Lead ECG in the PCR as a Procedure along with the interpretation (Paramedic).**
- **EMT may administer Nitroglycerin to patients already prescribed medication. May give from EMS supply.**
- **Agency medical director may require Contact of Medical Control prior to administration.**