CHEST PAIN-SUSPECTED CARDIAC ISCHEMIA

Effective: January 1, 2025
Replaces: January 1, 2024

1. Patient Care Goals

1.1. 12-lead ECG obtained within 10 minutes of patient contact
1.2. Determine time of symptom onset
1.3. Administration of ASA and NTG unless contraindications present
1.4. Transmission of 12-lead ECG and STEMI Alert advanced notification to receiving hospital

2. BLS Treatment

2.1. Routine Medical Care – Adult **(700-S04)**
2.1.1. **If patient is short of breath, hypoxemic or has obvious signs of congestive heart failure, administer Oxygen** – titrate to achieve pulse oximetry saturation between 94%-98%
2.2. **Aspirin 324mg PO** (chewable) as soon as possible
2.3. Treat for signs and symptoms of shock as necessary **(700-A10)**
2.4. May assist patient in taking his/her own Nitroglycerin if patient is alert, oriented and had a SBP greater than 100 mmHg

3. ALS Treatment

3.1. **Vascular Access (IV)**, TKO
3.2. Obtain quality, artifact free, **12 Lead ECG**, if 12 Lead ECG states "**STEMI"** or "**Acute MI Suspected":**
3.2.1. Determine closest most appropriate STEMI receiving center
3.2.2. Transmit 12 Lead ECG to the selected STEMI Center, when the first transmission capable monitor arrives, regardless of ETA to receiving facility **(700-M09)**
3.2.3. **Provide advanced notification of STEMI Alert patient (Policy 501)**
3.3. **Nitroglycerin 0.4mg SL**
3.3.1. Repeat every 3 minutes, max of 3 doses, for continued pain and discomfort, and if SBP remain greater than 100 mmHg
3.3.2. If the patient becomes hypotensive after the administration of Nitroglycerin:
3.3.2.1. Place the patient in shock position, if possible
3.3.2.2. Consider **250ml Fluid bolus**
3.3.2.3. If no improvement after 5 minutes, treat according to **(700-A10)**
3.4. **Morphine Sulfate 2mg slow IV,** if systolic blood pressure is greater than 100 mmHg and; if still symptomatic after 3 nitroglycerin doses, or if nitroglycerin is contraindicated
3.4.1. **May repeat Morphine Sulfate 2 mg IV** every 5 minutes, to a max of 20 mg

4. Sympathomimetic Related Chest Pain

4.1. If chest pain is related to sympathomimetic use:
4.1.1. AND is not relieved with nitroglycerin or morphine;
4.1.2. AND sustained tachycardia;
4.1.3. Administer **Midazolam 2.5mg IV**
4.2. **BASE CONTACT**: if additional Midazolam above 2.5mg is needed

Protocol # 700-A08

5. Pertinent Assessment Findings

5.1. Suspected right-sided or inferior infarcts noted on a 12-lead ECG do not preclude use of nitrates, however, providers must be prepared to resuscitate if hypotension occurs

5.2. 12-lead ECG should be obtained according to findings listed in **(700-M09)** as ACS/STEMI can present with atypical pain, vague or only generalized complaints

6. Key Documentation Elements

6.1. Time of symptom onset

6.2. Time of first 12 Lead ECG

6.3. Time of aspirin administration

6.4. Time of STEMI Alert notification to hospital

7. Special Considerations

7.1. Consider placing defibrillator pads on high-risk patients

7.2. To avoid hypotension, withhold nitroglycerin if patient has taken phosphodiesterase inhibitor within the past 48 hours. Examples include: Sildenafil (Viagra, Revatio),or Vardenafil (Levitra, Staxyn, Tadalafil (Cialis, Adcirca),

Withhold nitroglycerin use in patients receiving intravenous epoprostenol, or treporstenil (Remoudulin, Flolan) for pulmonary hypertension.

8. Chest Pain – Suspected Cardiac Ischemia Treatment Flow Chart