AHA ACLS Acute Coronary Syndrome Algorithm

Symptoms Indicate possible Ischemia or infarction

EMS and Prehospital Care
- Monitor support ABC’s. Readiness for CPR and/or defibrillation
- Obtain 12-Lead ECG; (STEMI) ST elevation should be reported to the receiving facility
- Medications to give: Aspirin, Oxygen, SL Nitroglycerine and Morphine
- Hospital should prepare to respond to STEMI

Immediate ED Assessment & Treatment:
- Provide nitroglycerine sublingual or spray
- Perform brief, targeted hx. & physical exam obtain
- Review fibrinolytic checklist. Check contraindications
- Obtain cardiac marker levels, electrolyte, and coagulation tests. Portable chest x-ray (<30 min.)

ST Elevation (STEMI)

• Start appropriate therapies: Heparin, NTG, β-blockers
• Reperfusion Therapy STAT

Symptoms ≤ 12 hrs
- Yes
- No

ST depression (NSTEMI)

Elevated Troponin or high-risk patient
- Signs for invasive therapy:
  - Continued chest discomfort
  - Continued ST deviation
  - Unstable hemodynamics
  - Heart Failure
  - Ventricular Tachycardia

Adjunctive Therapies
- Nitroglycerine (IV/PO)
- Heparin (IM/IV)
- Possibly: β-blockers
- Possibly: Clopidogrel
- Possibly: Glycoprotein IIb/IIIa inhibitor

• Admit to monitored bed
• Continue ASA, heparin, and other indicated therapies.
• ACE Inhibitors/ARB
• Statin Therapy
• Expert consultation to assess cardiac risk factors

Normal ST segment

Develops 1 or more:
- ECG changes (ST elevation/depression)
- Troponin Elevated
- Worsening chest discomfort or arrhythmias

• Possible admission: monitor serial ECG and cardiac markers.
• Consider non-invasive testing like treadmill or thallium stress test.

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• Abnormal results from non-invasive diagnostic tests mentioned above
• Abnormal results from ECG or troponin

Discharge and schedule Follow-up