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:
- 12 Lead ECG (if not done pre-hospital)
- Obtain vital signs; O2 sat
- Oxygen if O2 sat < 94%; 4L then titrate
- Provide Aspirin 160-325 mg
- Provide nitroglycerine sublingual or spray
- Establish IV & give Morphine if needed

Read ECG

ST Elevation (STEMI)
- Start appropriate therapies: Heparin, NTG, β-blockers
- Reperfusion Therapy STAT
- Symptoms ≤ 12 hrs

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

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

YES

NO

Discharge and schedule Follow-up

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