Acute Coronary Syndromes Algorithm—2015 Update

1. Symptoms suggestive of ischemia or infarction

2. EMS assessment and care and hospital preparation:
   - Monitor, support ABCs. Be prepared to provide CPR and defibrillation
   - Administer aspirin and consider oxygen, nitroglycerin, and morphine if needed
   - Obtain 12-lead ECG; if ST elevation:
     - Notify receiving hospital with transmission or interpretation; note time of onset and first medical contact
   - Notified hospital should mobilize hospital resources to respond to STEMI
   - If considering prehospital fibrinolysis, use fibrinolytic checklist

3. Concurrent ED assessment (<10 minutes)
   - Check vital signs; evaluate oxygen saturation
   - Establish IV access
   - Perform brief, targeted history, physical exam
   - Review/complete fibrinolytic checklist; check contraindications
   - Obtain initial cardiac marker levels, initial electrolyte and coagulation studies
   - Obtain portable chest x-ray (<30 minutes)

4. ECG interpretation

5. ST elevation or new or presumably new LBBB; strongly suspicious for injury ST-elevation MI (STEMI)
   - Start adjunctive therapies as indicated
   - Do not delay reperfusion

6. Time from onset of symptoms ≤12 hours?

7. >12 hours

8. Reperfusion goals:
   Therapy defined by patient and center criteria
   - Door-to-balloon inflation (PCI) goal of 90 minutes
   - Door-to-needle (fibrinolysis) goal of 30 minutes

9. ST depression or dynamic T-wave inversion; strongly suspicious for ischemia
   - High-risk non–ST-elevation ACS (NSTE-ACS)

10. Troponin elevated or high-risk patient
    - Consider early invasive strategy if:
      - Refractory ischemic chest discomfort
      - Recurrent/persistent ST deviation
      - Ventricular tachycardia
      - Hemodynamic instability
      - Signs of heart failure
    - Start adjunctive therapies (eg, nitroglycerin, heparin) as indicated

11. Normal or nondiagnostic changes in ST segment or T wave
    - Low-/intermediate-risk ACS

12. Consider admission to ED chest pain unit or to appropriate bed for further monitoring and possible intervention.

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