CHAPTER 8. ACUTE CORONARY SYNDROMES, SELF-ASSESSMENT QUESTIONS

1. A 68-year-old man with a history of ischemic heart disease develops severe chest pain (8/10 on a pain scale) with subsequent ECG depression in leads II, III, and aVF. Serum creatinine is 1.0 mg/dL (88 µmol/L) and troponin I is 3.4 ng/mL (3.4 mcg/L; 3400 ng/L). Which of the following differentiates MI from UA in this patient?

A. Location of the coronary artery blockade  
B. Quality of chest discomfort  
C. Severity of coronary artery disease  
D. Elevated plasma troponin concentration  
E. ECG changes

2. A 76-year-old man with prior history of coronary artery disease, hypertension, hyperlipidemia and stroke is found to have STEMI and receives a DES. Which dual antiplatelet regimen is most appropriate for him to receive at time of discharge?

A. Aspirin 325 mg and clopidogrel 75 mg daily  
B. Aspirin 325 mg and ticagrelor 90 mg twice daily  
C. Aspirin 325 mg and prasugrel 10 mg daily  
D. Aspirin 81 mg and prasugrel 10 mg daily  
E. Aspirin 81 mg and ticagrelor 90 mg twice daily

3. An 82-year-old man with STEMI was brought by ambulance to a small community hospital during nighttime (off-peak) hours. The nearest hospital with operating catheterization facilities is a 2.5-hour distance away. Which of the following addresses the appropriate reperfusion for this patient?

A. Fibrinolytic therapy  
B. An early invasive strategy  
C. A delayed invasive strategy  
D. An ischemia-guided approach  
E. A percutaneous strategy

4. A 54-year-old woman with a CrCl of 20 ml/min (0.33 mL/s) is being treated for ACS by utilizing an ischemia-guided strategy. In addition to aspirin 81 mg daily, which of the following medication combinations is most appropriate in this patient?

A. Clopidogrel, UFH, abciximab  
B. Ticagrelor, enoxaparin, eptifibatide  
C. Prasugrel, fondaparinux  
D. Ticagrelor, UFH  
E. Clopidogrel, bivalirudin, tirofiban

5. A 62-kg (137-lb) man with CrCl of 55 mL/min (0.92 mL/s) is found to have a NSTE-ACS. Troponin levels, drawn at three separate intervals, are all negative. Which of the following is the preferred antithrombotic regimen, in addition to ASA and clopidogrel if an ischemia-guided strategy is chosen?

A. UFH infusion and eptifibatide IV infusion 2 mcg/kg/min  
B. Enoxaparin 60-mg SC twice daily  
C. Bivalirudin bolus plus infusion  
D. Fondaparinux 2.5 mg SC twice daily  
E. Bivalirudin bolus plus eptifibatide IV infusion 2 mcg/kg/min

6. A 45-year-old patient with STEMI presents to a hospital without the capacity to perform primary PCI. It has been 2 hours since the onset of chest discomfort with BP 134/80 mm Hg, HR 98 bpm, and troponin 10.8 ng/mL (10.8}
mcg/L; 10,800 ng/L). In addition to ASA and IV NTG which early therapy option would be best to start within the first 24 hours to treat symptoms, and prevent long term complications?

A. Clopidogrel, enoxaparin, ramipril, reteplase  
B. Clopidogrel, enoxaparin, tenecteplase  
C. Reteplase, UFH, metoprolol, enalapril  
D. Tenecteplase, bivalirudin, metoprolol  
E. Alteplase, bivalirudin, lisinopril

7. Which of the following is a contraindication to eplerenone in a patient with heart failure following MI?

A. EF less than 40% (0.40)  
B. Persistent angina  
C. Angioedema to an ACE inhibitor  
D. Serum potassium of 5.6 mEq/L (5.6 mmol/L)  
E. Heart rate less than 60 beats/min

8. Which of the following represents the most appropriate antiplatelet regimen in a 55-year-old patient (weight 70 kg [154 lb]) administered tenecteplase 2 hours previously for STEMI?

A. 600-mg clopidogrel loading dose, followed by 75 mg daily  
B. 300-mg clopidogrel loading dose, followed by 75 mg daily  
C. No clopidogrel load, followed by 75 mg daily  
D. 60-mg prasugrel loading dose, followed by 5 mg daily  
E. 60-mg prasugrel loading dose, followed by 10 mg daily

9. Which of the following patients is most likely to receive the most benefit from a GPI?

A. A 47-year-old diabetic man with STEMI undergoing primary PCI receiving ticagrelor  
B. A 68-year-old man with NSTE-ACS undergoing PCI receiving bivalirudin and prasugrel  
C. A 60-year-old woman with negative troponins, receiving clopidogrel  
D. An 82-year-old man with positive troponins, receiving ticagrelor  
E. A 53-year-old woman with positive troponins, receiving heparin

10. Which of the following anticoagulants is preferred for PCI in a patient with a history of heparin-induced thrombocytopenia and ACS?

A. UFH  
B. Enoxaparin  
C. Bivalirudin  
D. Fondaparinux  
E. Dalteparin

11. Which of the following is the correct coagulation monitoring goal for a patient with ACS receiving enoxaparin?

A. Activated partial thromboplastin time (aPTT) 2.0 to 3.0 times control  
B. aPTT 50 to 70 seconds  
C. Activated clotting time less than 32 seconds  
D. Anti-Xa levels greater than 1.5 IU/mL (1.5 kIU/L)  
E. No coagulation goal recommended

12. Which of the following best describes a patient with ACS who is a candidate for treatment with amlodipine added to β-blocker?

A. Continued chest discomfort despite nitrates and atenolol  
B. Acute heart failure while receiving metoprolol
C. HR of 80 bpm and BP of 150/90 mm Hg while receiving low-dose metoprolol and enalapril 
D. Stable chronic obstructive pulmonary disease receiving a low-dose atenolol 
E. Contraindication to metoprolol receiving diltiazem 

13. In patients undergoing coronary artery bypass graft (CABG) surgery, which of the following is a preferred antithrombotic strategy in addition to aspirin? 

A. UFH, discontinue prasugrel 5 days prior to surgery 
B. Eptifibatide, discontinue clopidogrel 7 days prior to surgery 
C. UFH, discontinue ticagrelor 5 days prior to surgery 
D. Fondaparinux, discontinue clopidogrel 5 days prior to surgery 
E. Bivalirudin, discontinue prasugrel 24 hours prior to surgery 

14. Which anticoagulant regimen would be most appropriate for a 76-year-old woman (weight 64 kg [141 lb]) with NSTE-ACS with an estimated CrCl of 50 ml/min (0.83 mL/s) undergoing PCI? 

A. UFH 3800 unit bolus, followed by 800 units/hour 
B. Enoxaparin 140-mg SC twice daily 
C. Fondaparinux 2.5-mg SC daily 
D. Bivalirudin 24.5-mg bolus, followed by 35 mg/kg/hour infusion 
E. No anticoagulant needed 

15. Secondary interventions proven to reduce risk following ACS include all of the following except: 

A. Pneumococcal vaccination in age older than 65 years 
B. Cardiac rehabilitation 
C. Nonsteroidal anti-inflammatory agents 
D. Cholesterol management 
E. Dual antiplatelet therapy
ANSWERS
1. D
2. E
3. A
4. D
5. B
6. B
7. D
8. B
9. E
10. C
11. E
12. A
13. C
14. A
15. C