Individualized Antiplatelet Therapy in Acute Coronary Syndrome  
Evidence-Based Perspectives

Faculty

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Critical Teaching Points

- Variable patient response to antiplatelet therapy suggests potential future role for testing (platelet function and/or genetic polymorphisms) and adjustment of therapy accordingly  
- In using dual antiplatelet therapy, clinicians must balance bleeding risk versus reduction in ischemic events  
  - Patients who are poor clopidogrel responders or who have diabetes: consider increasing the clopidogrel dose or alternative therapy (more potent agent or triple therapy)  
  - Patients who are at high bleeding risk: avoid high doses or more potent agents

- A comprehensive discharge plan, including dual antiplatelet therapy and all modifiable risk factors, should be communicated clearly to the primary care physician

Essential Elements of Case Study

ST-segment elevation myocardial infarction (STEMI) remains a major challenge for clinicians. Combinations of antiplatelet and anticoagulant agents are used in the acute setting, while dual antiplatelet therapy is part of standard of care following discharge. Therapy is tailored to reduce risk of recurrent ischemic events while minimizing risk of major bleeding. Dr. Cannon will illustrate this approach in the context of a challenging case involving Anthony, a retired banker with diabetes and hypertension who presents with STEMI.

Presenting Symptoms

- Presents to Emergency Room with severe chest discomfort of 1-hour duration, provoked by yard work  
- Continued, though reduced chest discomfort on admittance  
- ECG shows 1 mm ST-segment elevation in leads V2-V3

Personal History

- 74-year-old male  
- Retired investment banker  
- Frequent alcohol use  
- No illicit drug use

Family History

Father

- Hypertension  
- Fatal stroke at 83

Mother

- Died of breast cancer at 86

Medical History

- Hypertension, 20 years  
- Type 2 diabetes, 5 years

Medication History

- Metformin 2000 mg  
- Ramipril 10 mg  
- Rosuvastatin 5 mg  
- Hydrochlorothiazide 12.5 mg  
- Aspirin 81 mg

Initial Treatment

- Nitroglycerin 0.4 mg sublingual  
- Aspirin 325 mg  
- Metoprolol 25 mg

Clinical Course

- At angiography, he was found to have 70% hazy lesions in his proximal and mid left anterior descending artery.
Reference List


Bowry ADK, Brookhart MA, Choudhry NK. Meta-analysis of the efficacy and safety of clopidogrel plus aspirin as compared to antiplatelet monotherapy for the prevention of vascular events. Am J Cardiol. 2008;101:960-966.


