

**Atrial Fibrillation: A Case-based Approach**  
**CCPN 11<sup>th</sup> Annual Contemporary Cardiovascular Therapy Fall Symposium**  
**Edmonton, Alberta**  
**September 17, 2011**

Grace is a 73 year old female who presents to the emergency department on July 19 with complaints of shortness of breath, lethargy and fluttering in the chest. She is found to be febrile and a chest x ray shows an infiltrate in her left lower lobe. An ECG shows that she is in atrial fibrillation. She is admitted with the diagnosis of community acquired pneumonia and atrial fibrillation with rapid ventricular response.

**Past Medical History:**

Hypertension x 9 years  
GERD – controlled  
Osteoarthritis  
Hemorrhoids

**Medications prior to admission:**

Coversyl Plus 1 tab daily (Perindopril 4 mg/Indapamide 1.25 mg)  
Lansoprazole 30 mg daily  
Tums (extra strength) 1 daily  
Vitamin D 400 units daily

**Social hx:**

1 Glass of wine 3 x/week  
Lives with husband, enjoys traveling 3 – 4 trips abroad/year  
Retired x 9 years (was a school teacher)

**On admission to the ward:**

Physical Exam:  
HR 144 BP 142/94 RR 15 Temp 38.6°C  
Pulse: irregularly irregular  
Decreased air entry to left bases

**Labs:**

Lytes - normal (K<sup>+</sup> 3.9 mmol/L)  
WBC: 14.2  
Estimated CrCl 65 ml/min

**ECG:**

AF, HR 146

**Diagnosis:** Community acquired pneumonia  
Atrial fibrillation

**Medications Upon admission:**

Levofloxacin 750 mg po daily x 5 days

Calcium carbonate 1250 mg po daily

Vitamin D 400 units po daily

Diltiazem CD 120mg daily (patient received diltiazem 20 mg IV in ED)

Lansoprazole 30 mg po daily

**Part A: Learning objectives**

Outline the goals of therapy for a patient **admitted** with atrial fibrillation

- Compare and contrast the IV and oral agents available for rate control
- Define the target heart rate for a hospitalized patient with a fib
- Discuss why rhythm control is not a goal of therapy in this patient
- Assess this patient's risk of cardioembolic stroke, major bleeding and the necessity of stroke prophylaxis at the point of hospitalization and beyond.
- Defend your choice of agent and dose for stroke prophylaxis this patient

**Part B: Learning objectives:**

In an **ambulatory setting** for a patient with AF:

- Define the target heart rate for an ambulatory patient with AF
- List the antiarrhythmic agents available for rhythm control
- Discuss options available for stroke prophylaxis, identifying the clinically relevant differences in the new (and soon to be available) oral anticoagulants
- Discuss strategy for switching from one oral anticoagulant to another
- Outline the monitoring plan for the various available agents, in particular drug interactions

**Part C: Learning objectives:**

In preparation for elective surgery (hip replacement) for Grace:

- Outline your plan for Grace pre-operatively
  - Determination of need for "bridging"
  - Timing of discontinuation of oral anticoagulant pre-op
- Outline your plan for Grace post-operatively
  - Discuss how the requirement of VTE prophylaxis would influence your plan
  - Timing of re-initiation of anticoagulation therapy, outlining agent and dose
- List the available options to reverse oral anticoagulation emergently (for instance if this had been hip fracture surgery rather than elective hip replacement)