SCD-HeFT: The Sudden Cardiac Death in Heart Failure Trial

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Study Design

Enrollment Scheme
- DCM + CAD and CHF
- EF < 35%
- NYHA Class II or III
- 6 minute walk, Holter

Placebo Amiodarone ICD

Results

Mortality by Intention-to-treat

<table>
<thead>
<tr>
<th>Months of follow-up</th>
<th>Amiodarone vs. Placebo</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.97 ± 0.05</td>
<td>0.89</td>
</tr>
<tr>
<td>1</td>
<td>0.94 ± 0.04</td>
<td>0.95</td>
</tr>
<tr>
<td>12</td>
<td>0.92 ± 0.03</td>
<td>0.97</td>
</tr>
<tr>
<td>24</td>
<td>0.90 ± 0.02</td>
<td>0.99</td>
</tr>
<tr>
<td>36</td>
<td>0.89 ± 0.02</td>
<td>1.00</td>
</tr>
<tr>
<td>48</td>
<td>0.88 ± 0.02</td>
<td>1.00</td>
</tr>
<tr>
<td>60</td>
<td>0.87 ± 0.02</td>
<td>1.00</td>
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Case Studies: Patient Assessment

- Symptom history
  - Frequency consider cardioversion
  - Assess for prophylaxis
  - Anticoagulation
- ECG
  - Ventricular response
  - QRS and QT interval
- Hemodynamic stability
- Echocardiogram
  - Structural heart disease
  - LV ejection fraction
- Thyroid Function
- Drug history

Case I

AL is a 61 year old female with valvular heart disease (secondary to rheumatic fever) who presents to the clinic with chief complaints of shortness of breath on exertion and palpitations. She states that these symptoms presented when walking her dog last evening. Upon rest she notes that she is no longer short of breath but still feels heart palpitations. AL was noted to be in no apparent distress during the physical exam.

Vitals: BP 113/76 mmHg, Pulse 133 beats/min irregular, Resp 16/min and afebrile

PMH: Mild/moderate mitral valve regurgitation
- Dilated cardiomyopathy
- Congestive heart failure (NYHA class II)

ECG: Atrial fibrillation, rate 95-145 beats/min, all intervals within normal limits.

Medications
- Furosemide 40 mg Bid
- Captopril 25 mg BID

Patient Assessment

Design a therapeutic plan.

- Explain any additional information needed prior to designing a therapeutic plan.
- What should be done to treat the patient’s symptoms.
Case I

AL is asymptomatic and resting comfortably. AL, however remains in AF.

• Explain the pros and cons of rate control management versus cardioversion and maintaining normal sinus rhythm.
• It was decided to try pharmacologic CV. What would be the most appropriate therapy?
• What should be done to maintain NSR
• Should anticoagulation be prescribed?

Case I: Follow up

AL is successfully treated and is discharged home. Over the next year AL has had seven hospital admission for symptomatic atrial fibrillation. A echocardiogram two months ago documented an ejection fraction of 32%. She presents today with palpitations, severe shortness of breath and dizziness which is unrelieved by rest. On ECG she is noted to be in atrial fibrillation with a systolic pressure of 85 mmHg. It was decided to electively use DCC, which placed AL into sinus rhythm. On exam after cardioversion, AL was noted to be in less distress and more comfortable.

Medications on Admission:
- digoxin 0.125 mg QD
- metoprolol 50 mg QD
- Warfarin 5 mg QD
- captopril 25 mg TID
- sotalol 120 mg BID, also failed quinidine

Case I: Follow up

What is your assessment of this patient's problems compared to last visit.

What will be your therapeutic goal and which therapy will be used to achieve this goal

State expected outcomes from therapy.