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ÚNICA EXPERIENCIA EDUCACIONAL EN TU ÁREA

Common Clinical Dilemmas in AF Management

SESSION DAY/TIME: Saturday, October 8, 10:45am-11:30am

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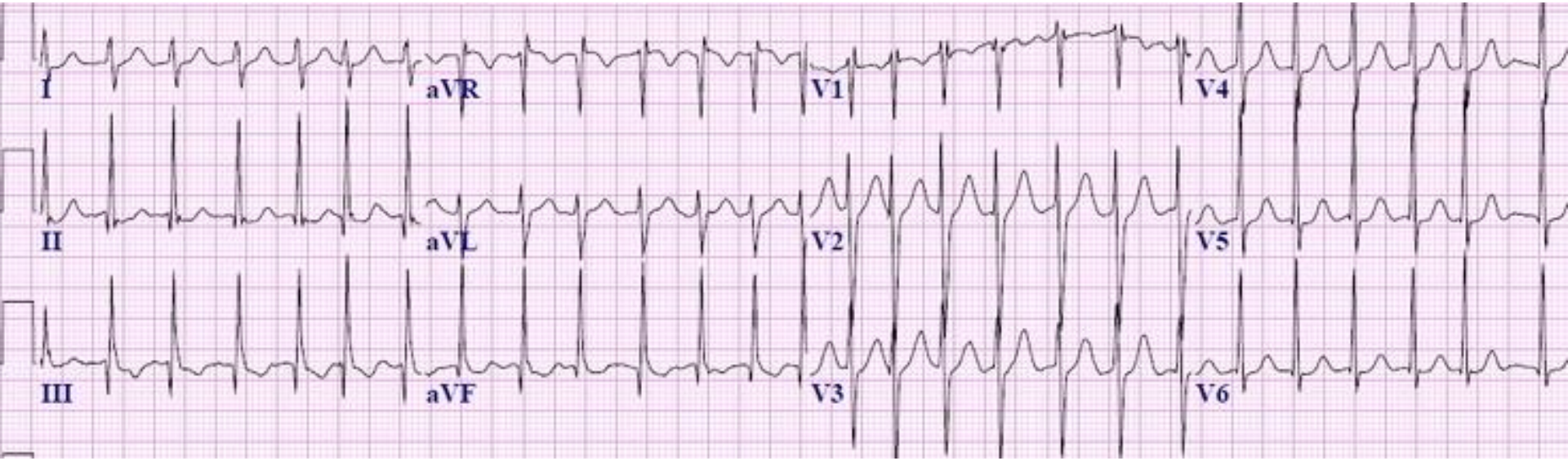
Disclosures: Research Support – St Jude Medical Inc.; Biosense Webster, Inc.

Case Study

- A 55 year old male presents with progressive exertional dyspnea and orthopnea. He denies chest pain or palpitation.
- On examination, there is evidence for systemic and pulmonary congestion. Heart rate is irregular, 110bpm and BP is 130/90.
- A 12 lead ECG recorded is shown:

Case Study: Contd



Case Study: Contd..

- Echocardiography shows global LV hypokinesis, LV EF 0.30; LA diameter of 4.4 cm and moderate mitral regurgitation.
- CT angiography shows normal coronary arteries. Diuretics, beta blockers and digoxin are prescribed with symptomatic improvement. Lisinopril and rivaroxaban are added and cardioversion is attempted after transesophageal echocardiogram showed no LA thrombus.
- AF recurred after 10 minutes. Heart rate is still 100 bpm at rest.

Case 3 Contd..

- At this time, the which of the following is the most appropriate next step?
  1. Add diltiazem
  2. Refer for AV nodal ablation and dual chamber pacing
  3. Load with dofetilide and reattempt cardioversion
  4. Refer for endomyocardial biopsy

Efficacy of Antiarrhythmic Drugs at One Year

Cochrane Systematic Review May 2012

Recurrence Following Cardioversion of AF

Controls: 69 – 84%; *Antiarrhythmic Drug:* 43 – 67%

Maintenance of SR at One Year Compared to Control

Drug	O.R. (95% CI)	NNT to prevent 1 AF @1year
Amiodarone	0.19 (0.14-0.27)	3
Class 1c	0.36 (0.28-0.45)	4 - 5
Dofetilide	0.30 (0.23-0.39)	5
Sotalol	0.51 (0.43-0.60)	8
Dronedarone	0.59 (0.46-0.75)	10

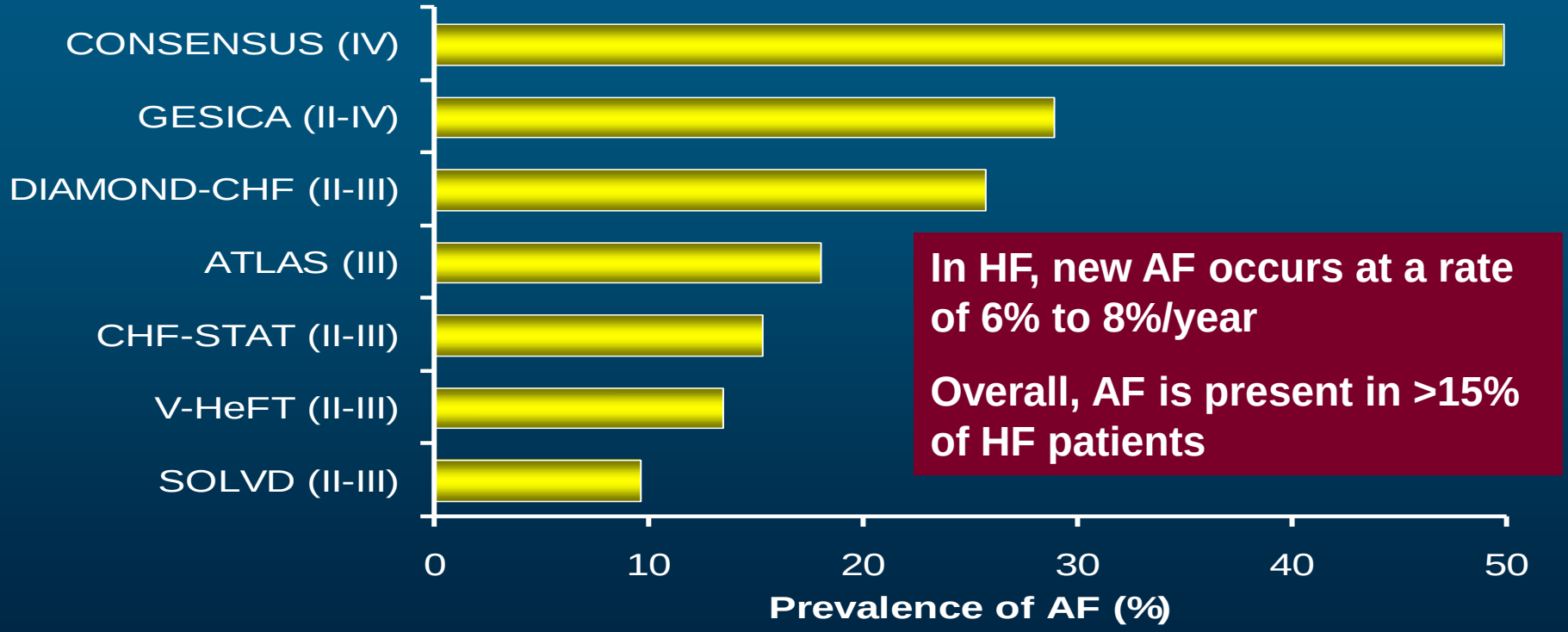
Tachycardia-Mediated Ventricular Cardiomyopathy

- Tachycardia that persists for weeks or months can cause progressive LV dysfunction, LV dilation and CHF.

- Usually reversible over several months, although there is evidence of continued LV remodeling at 1 year. *Dandamudi Heart Rhythm J 2008;5:1111-1114.*

- May be a genetic predisposition in pts with a polymorphism of the ACE gene *Desmukh, Int J Mol Med 2004;13:455-458.*

Risk of AF in HF Patients

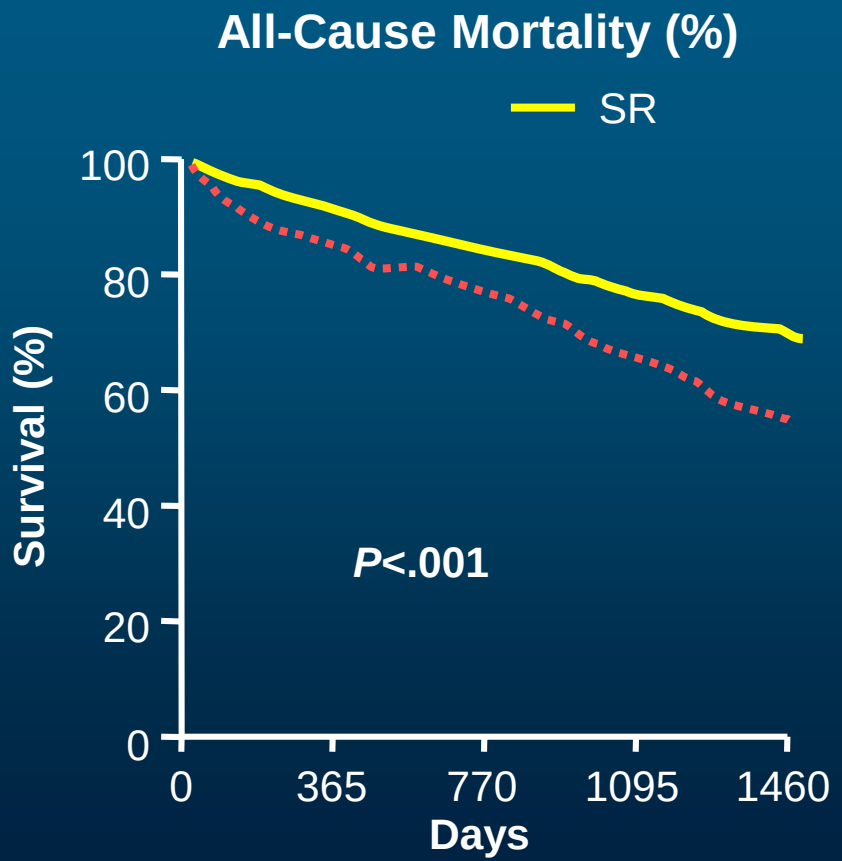


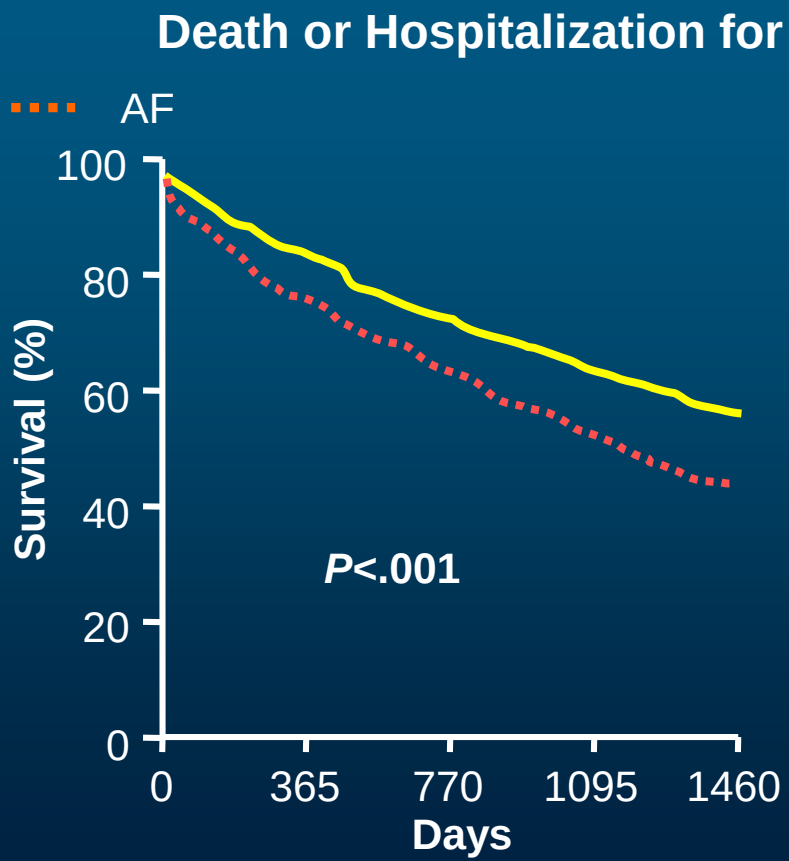
In HF, new AF occurs at a rate of 6% to 8%/year

Overall, AF is present in >15% of HF patients

Ehrlick et al. *J Cardiovasc Electrophysiol*. 2002;13(4):399-405 (B).

SOLVD: Influence of AF on Mortality





Dries et al. *J Am Coll Cardiol*. 1998;32(3):695-703 (B).

Questions Regarding Rate- vs Rhythm-Control Strategies and Outcomes

- Rate versus rhythm control for AF in CHF controversial
- Does the risk of antiarrhythmic therapy (drug or ablation) outweigh the benefit of SR?
- Would a better AAD (more effective, less toxic) change the balance in favor of SR?
- Will ablation change the balance in favor of SR?

Case Study Contd..

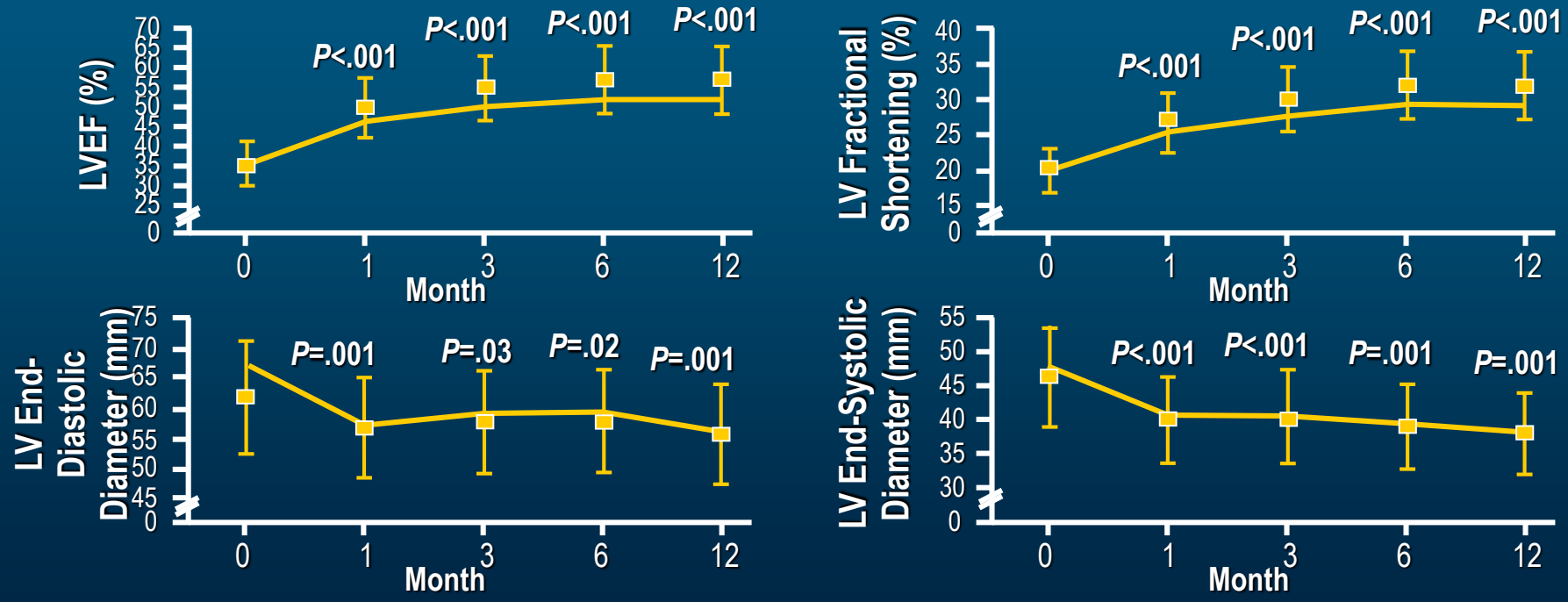
- The patient was loaded with dofetilide 500 mcg bid under telemetric monitoring after confirming he had normal renal function and K+ levels.
- He cardioverted successfully to sinus rhythm and discharged home.
- On review a month later, he was free of heart failure but he was back in atrial fibrillation with heart rate of 100 at rest.

Case Study Contd…

Which of the following is the best next step in his management?

1. Proceed to AV nodal ablation and pacing
2. Replace dofetilide with propafenone and repeat cardioversion
3. Refer for ablation of atrial fibrillation
4. Schedule implantation of an ICD

Improvement in LV Function/Dimensions After Ablation in AF Patients With CHF

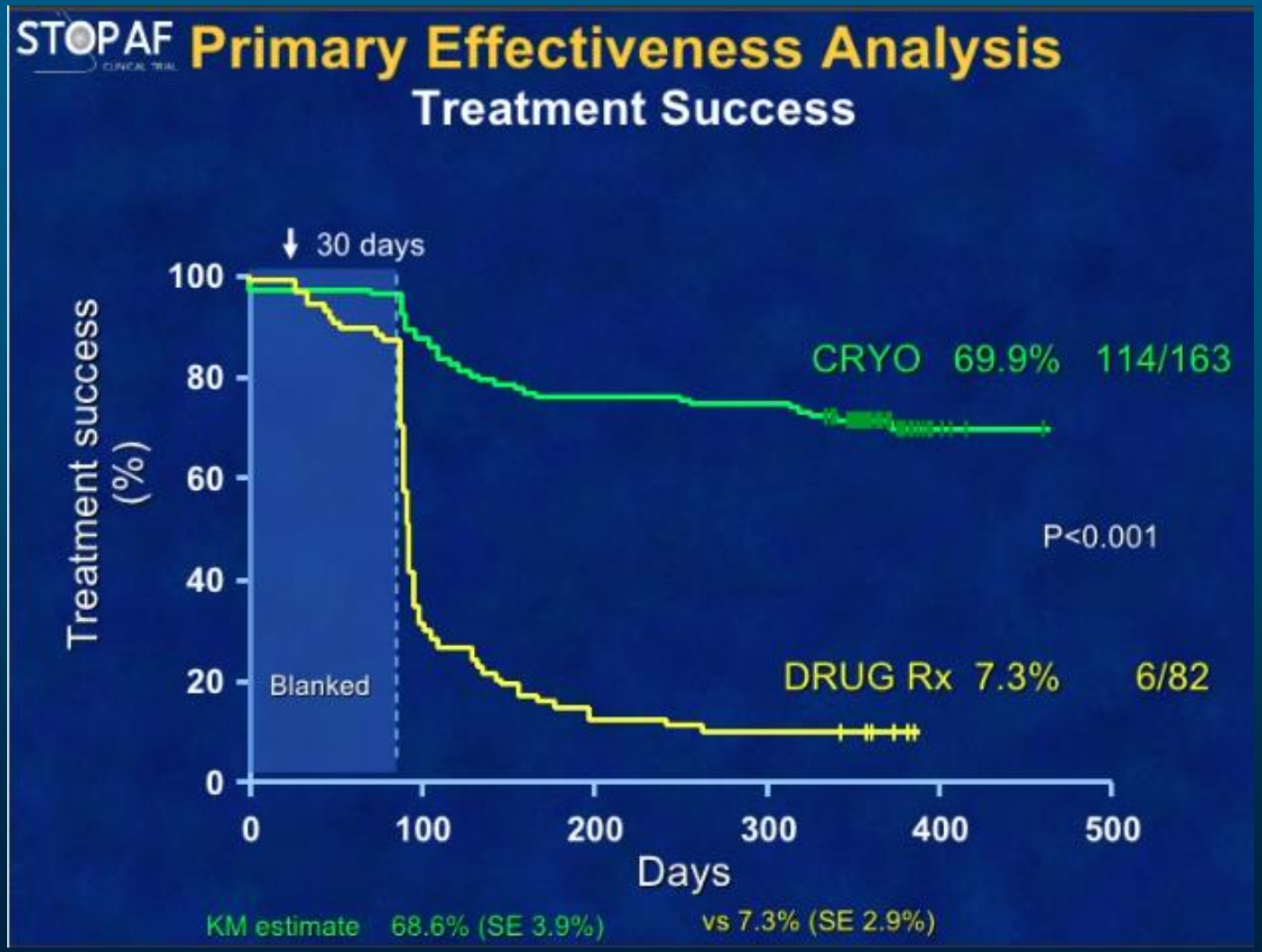


Hsu et al. N Engl J Med. 2004;351:2373-2383.

STOP AF Trial

Drug = 82
Cryo = 163

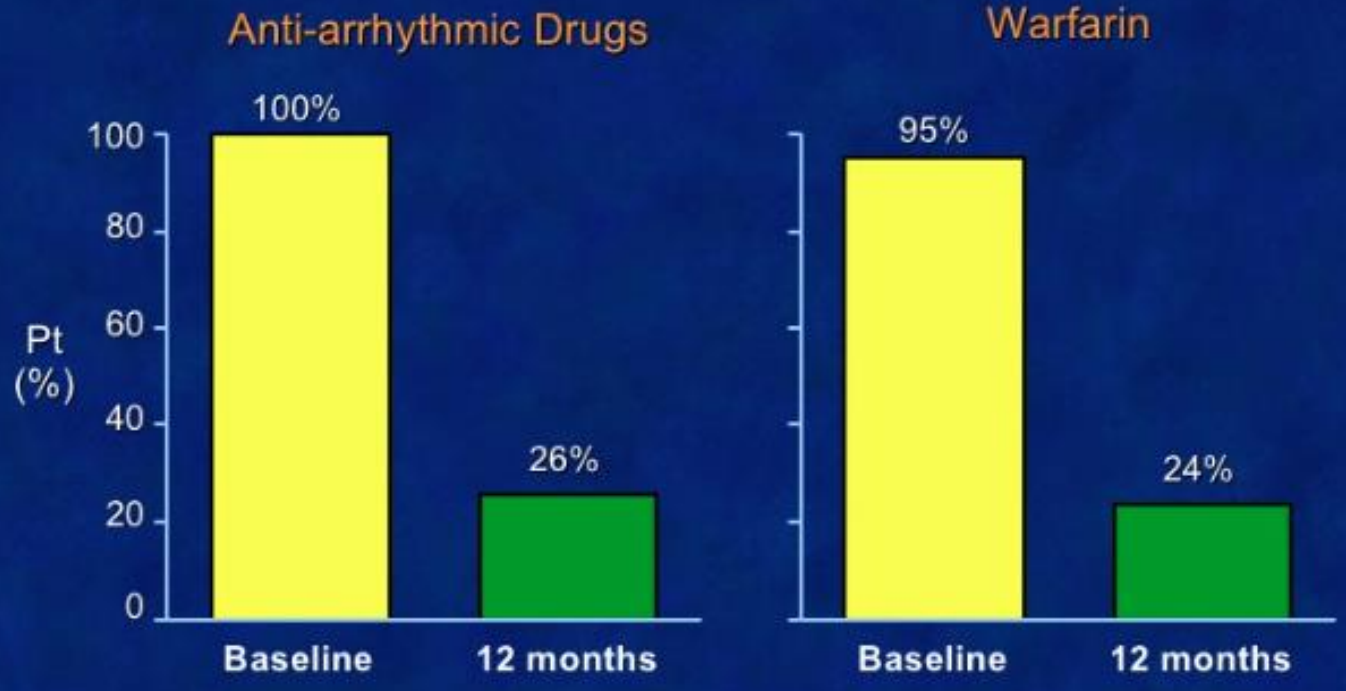
Packer et al. JACC 2013; 61: 1713



STOP AF CLINICAL TRIAL

Ongoing Drug Rx in CRYO Subjects

Treatment in STOP-AF at 12 Months



Summary

- Tachycardia myopathy associated with silent atrial fibrillation with rapid heart rates can reverse with control of AF
- Use of an antiarrhythmic drug and cardioversion is reasonable first step in management
- Ablation for atrial fibrillation is indicated in the event of drug failure after weighing risks/benefits
- The diagnosis of tachycardia myopathy is retrospective