Acute management of AF

Richard Schilling

Priorities for acute AF management

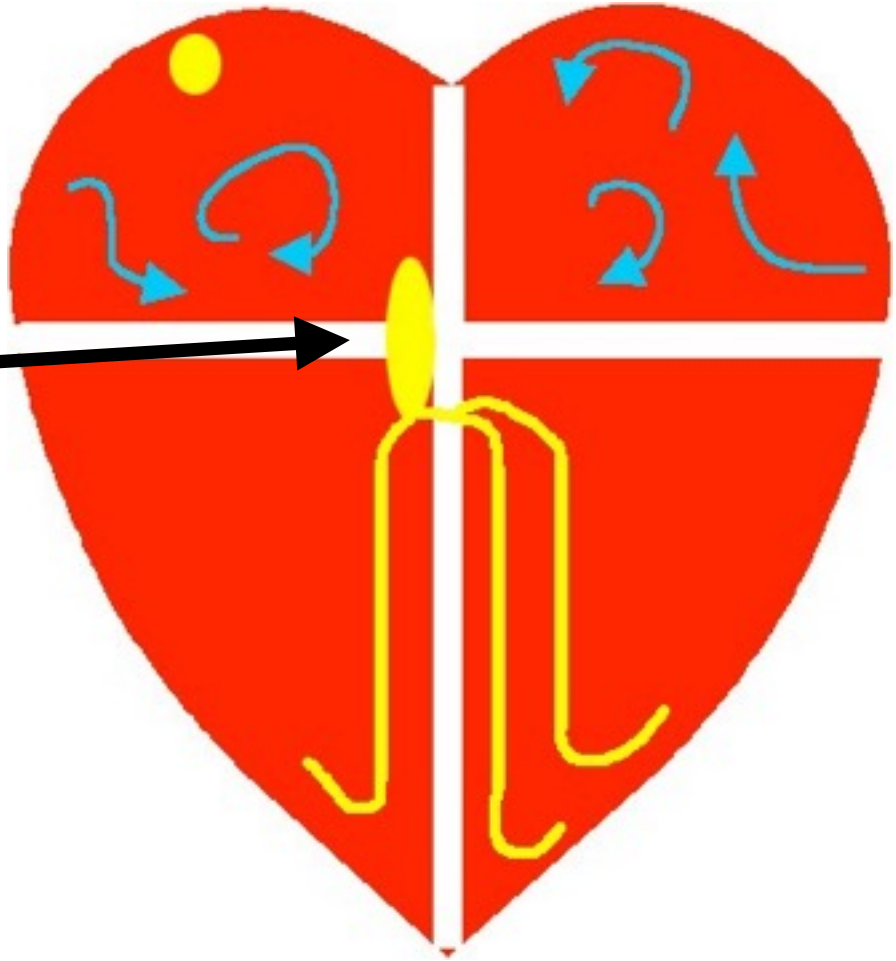
- Rate control
- Stroke prevention
- Rhythm control

Key issues in the acute setting

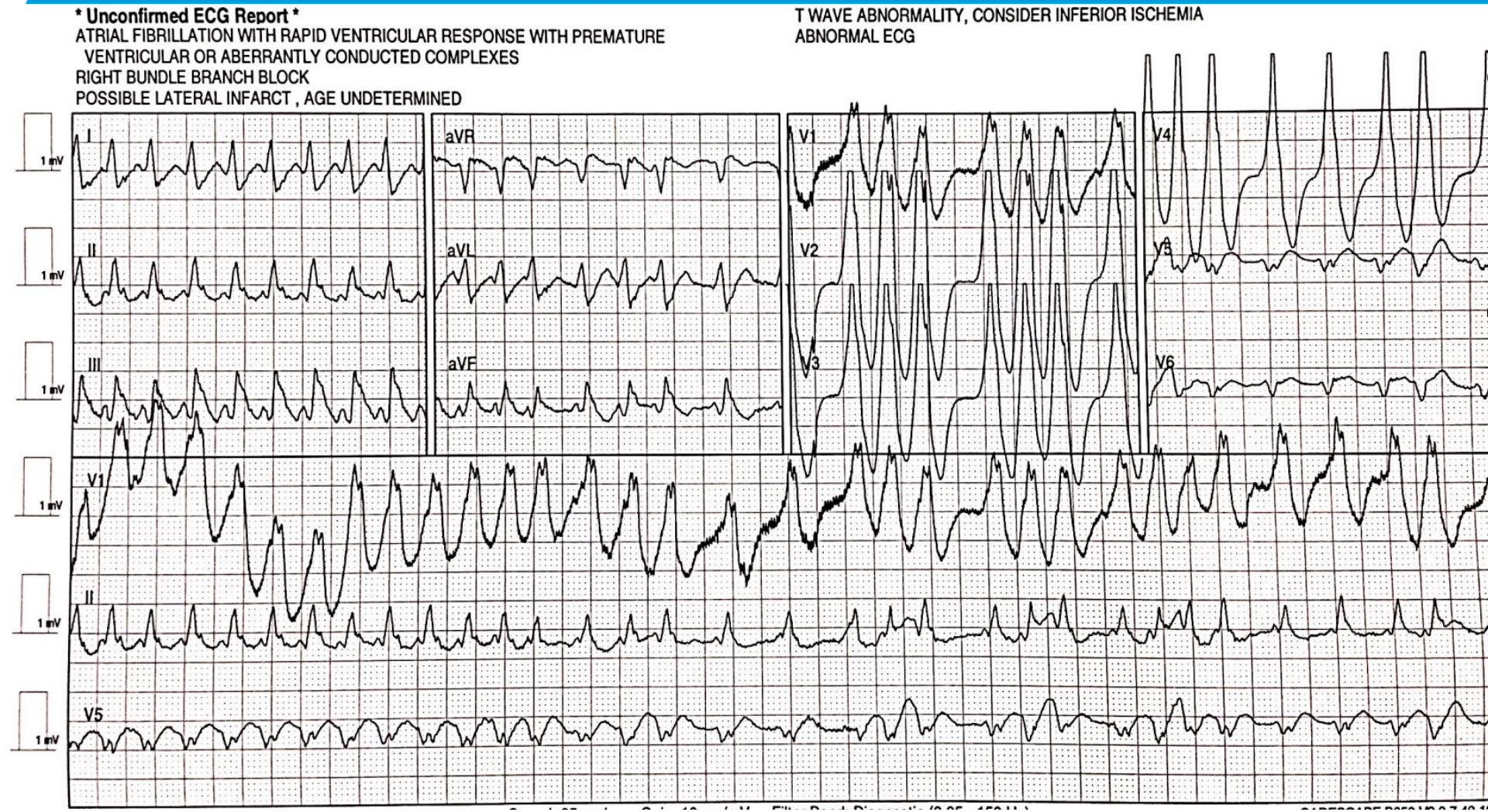
- anxiety - both patient and staff
- symptoms
- haemodynamic compromise

AF mechanism

rate limiter

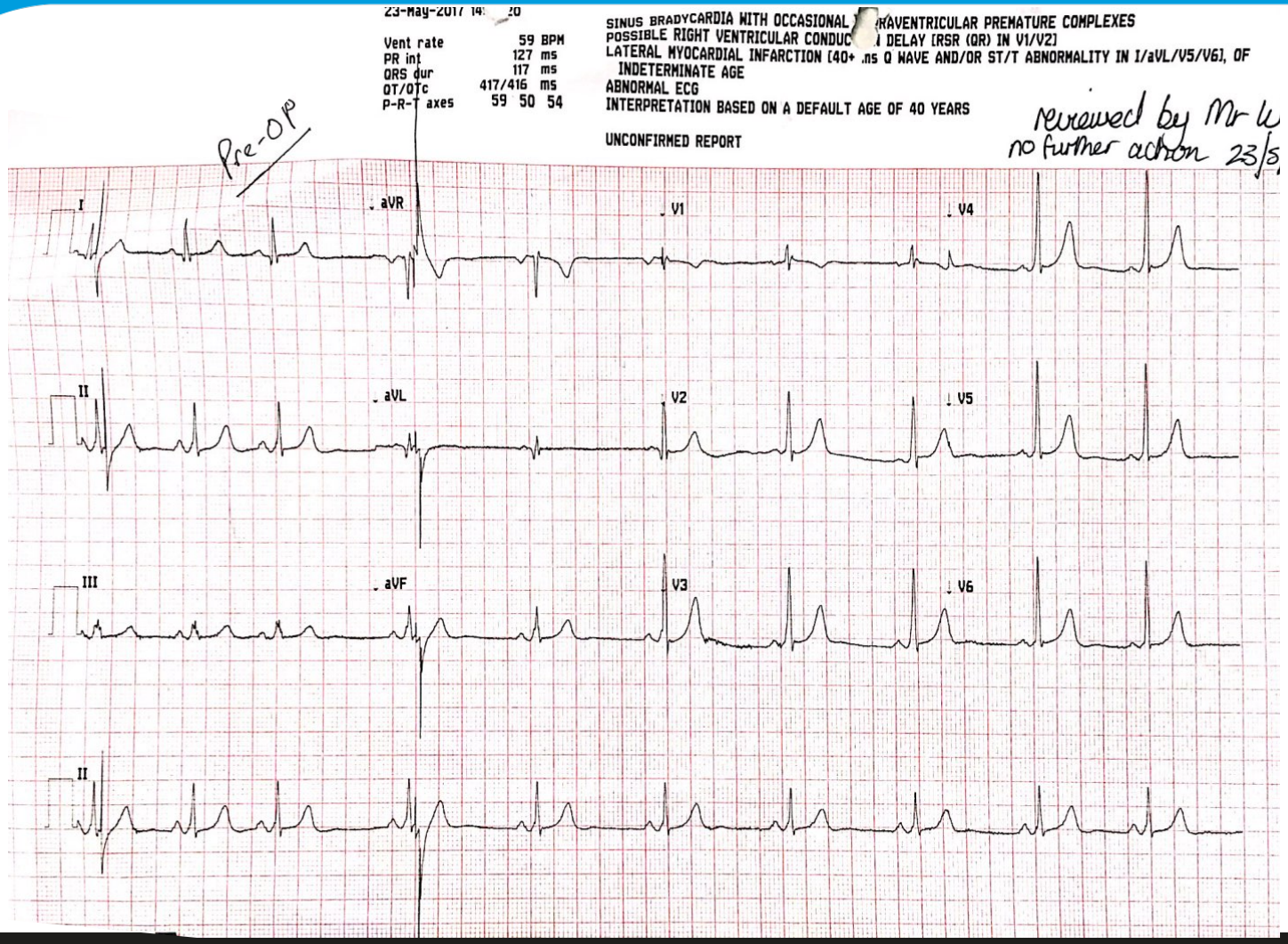


Exceptions



Barts Heart Centre

Asthmatic - Best treatment?



Barts Heart Centre

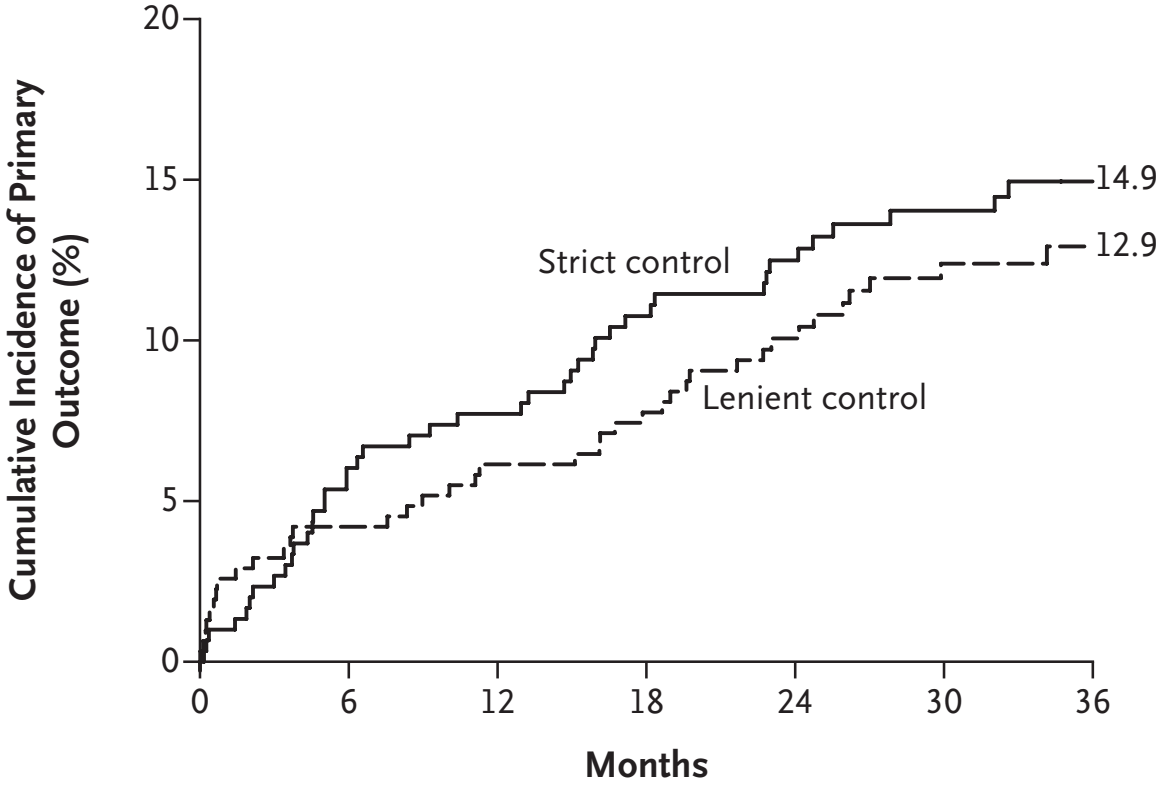
Rate control vs rhythm control

- RACE
  - Mortality 22.6% vs 17.2%
  - 39% vs 10% in SR
- AFFIRM
  - Mortality 23.8% vs 21.3 %
  - ↑ hospitalisation
  - ↑ Side effects
  - SR has a prognostic benefit

Van Gelder et al NEJM 2002
AFFIRM investigators NEJM 2002

Rate control

- Strict rate control has no advantage over lenient



No. at Risk							
Strict control	303	282	273	262	246	212	131
Lenient control	311	298	290	285	255	218	138

Van Gelder et al NEJM 2010

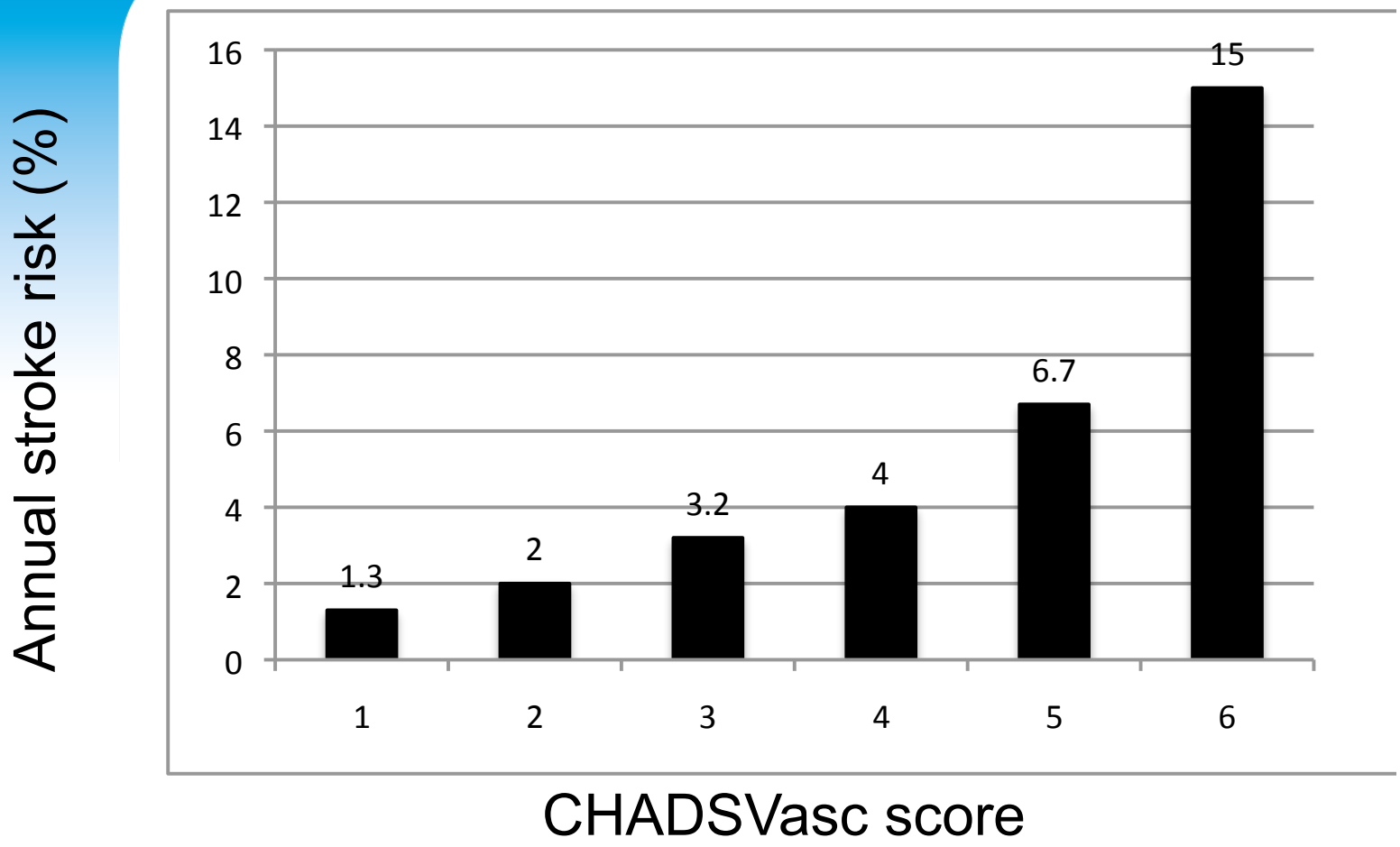
Step 1 Rate control

- A lenient heart rate control strategy is acceptable (resting HR<110) if asymptomatic
- Drugs of choice
  1. Beta-blockers
  2. Calcium channel blocker
  3. Both
  4. Digoxin

Step 1 Rate control

- Exceptions:
  - Reversible cause of AF
  - Heart Failure and AF
  - Acute onset AF (A+E)

Annual stroke risk per CHADSVasc score



Anticoagulation in the elderly

- n=973, aged >75yrs
- RCT aspirin vs warfarin
- Wafarin as safe as aspirin

	Warfarin (%)	Aspirin (%)	P
Stroke	1.6	3.4	0.003
Haemorrhagic stroke	0.5	0.4	0.83
All major haemorrhage	1.9	2	0.9

Mant et al Lancet 2007

Who is at bleeding risk?

Letter	Clinical characteristic[a]	Points awarded
H	Hypertension	1
A	Abnormal renal and liver function (1 point each)	1 or 2
S	Stroke	1
B	Bleeding	1
L	Labile INRs	1
E	Elderly (e.g. age >65 years)	1
D	Drugs or alcohol (1 point each)	1 or 2
		Maximum 9 points

Camm et al EHJ 2010

Stroke prevention

- NOAC
  - lower risk of intracranial haemorrhage
  - rapid onset and offset of action
  - reversible using beriplex/octaplex, specific agents
  - caution with renal impariment

Dont use S/C heparin

- Higher bleeding risk (particularly after stroke)
- Not reversible
- No proven benefit in AF

Step 2 stroke prevention

- Use CHADSVasc score
- Ignore female sex unless >65
- Probably CHADSVasc = 1
- Definitely CHADSVasc >1
- Minimise risk of hypertension, alcohol and labile INR
- Annual TTR and switch if <65%
- Don’t use aspirin

Step 3 Rhythm control

- Drug therapy
  - Normal heart - Flecainide
  - IHD - Sotalol
  - Structural heart disease - Dronedarone/Amiodarone
  - Heart failure - Amiodarone

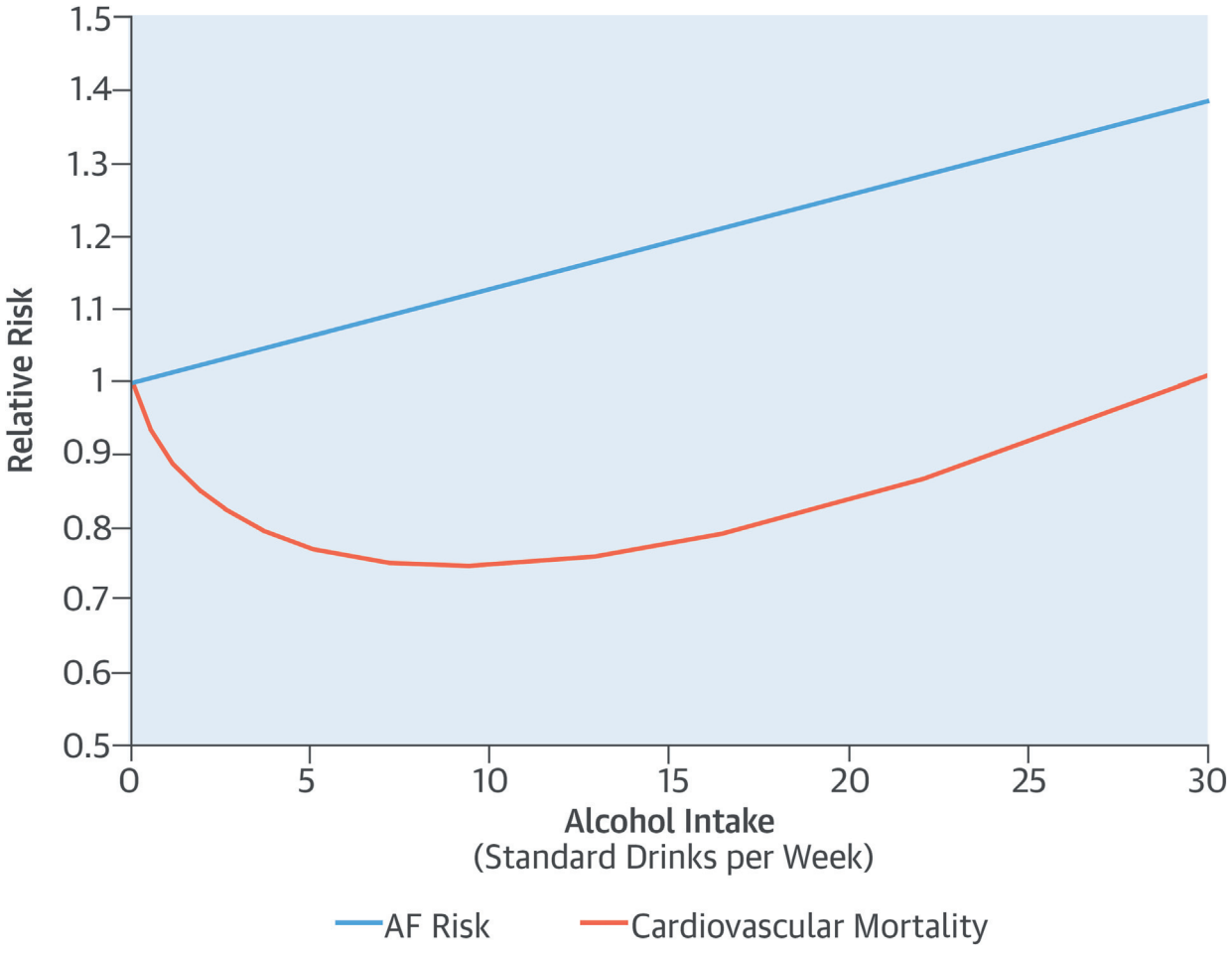
DC cardioversion

- At 1 year:
  - AF recurs 75% without antiarrhythmic
  - 40% with best antiarrhythmic (amiodarone)
- NICE - amiodarone 4 weeks and 12 months post CVersion

Pre-discharge counselling - Factors promoting AF

- Age
- Genetics
- Mammalian design
- Hypertension
- Alcohol
- Obesity
- Fitness

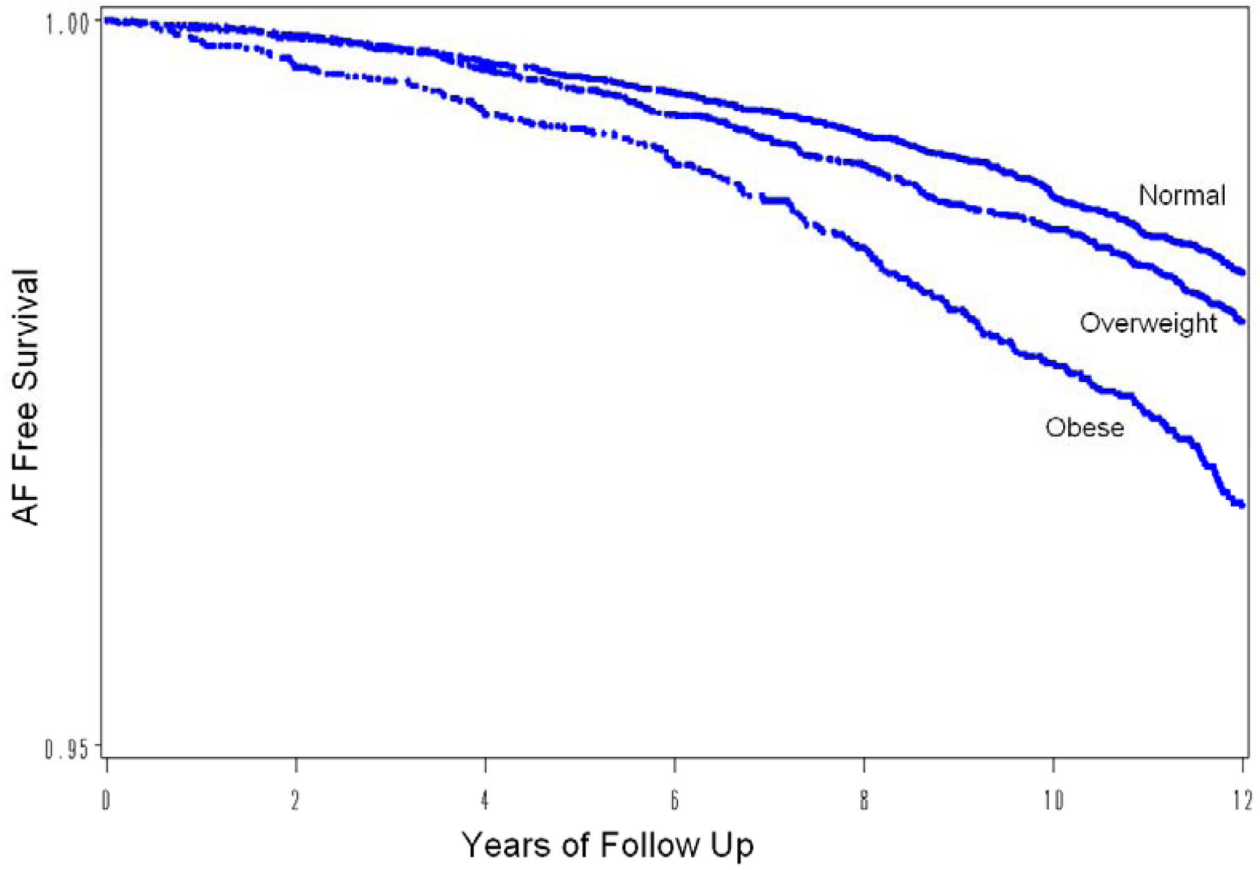
Alcohol and AF



Voskoboinik et al JACC 2016

Obesity and AF

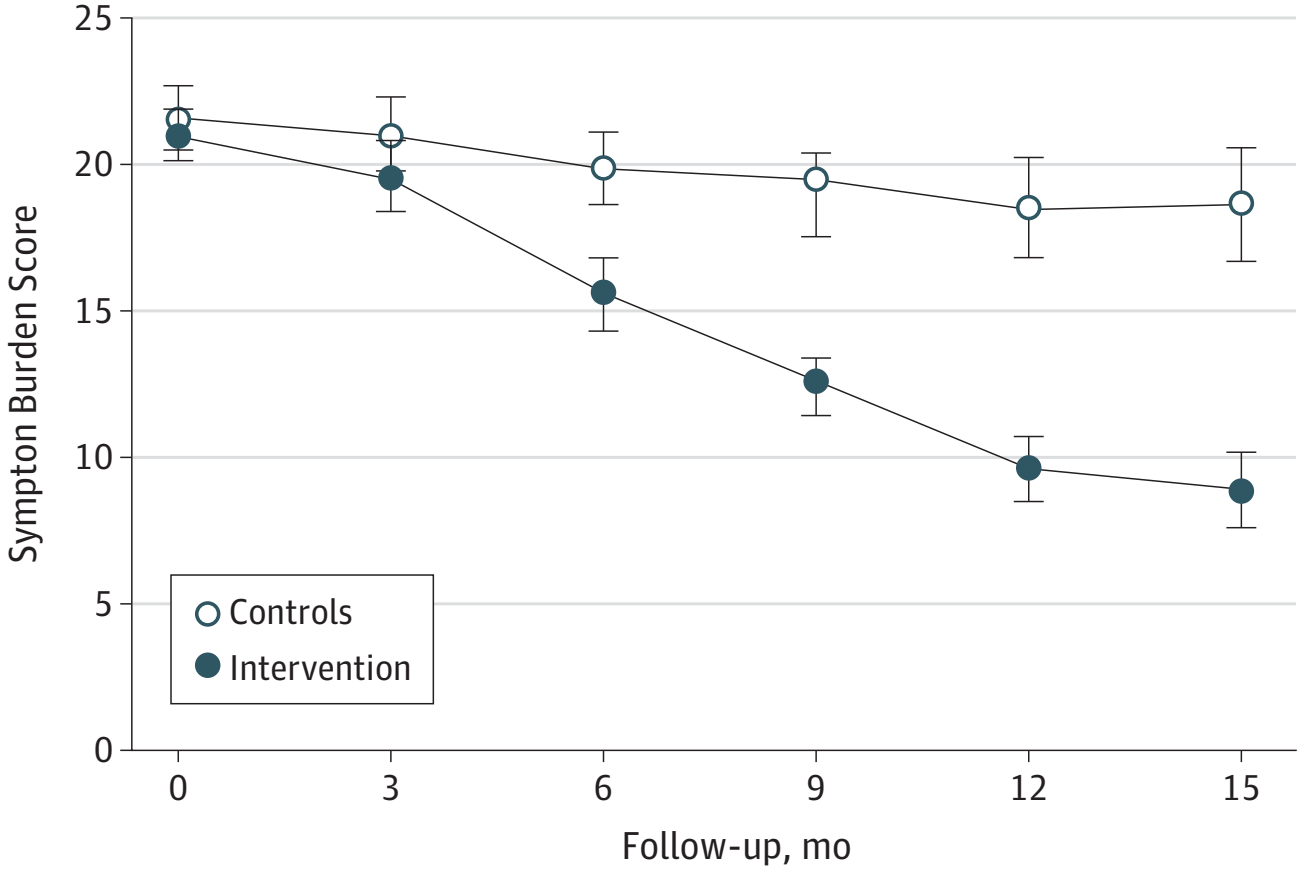
- Womens health study - 34,309 participants with 834 AF events



Tedrow et al JAMA 2010

Effect of intervention on AF

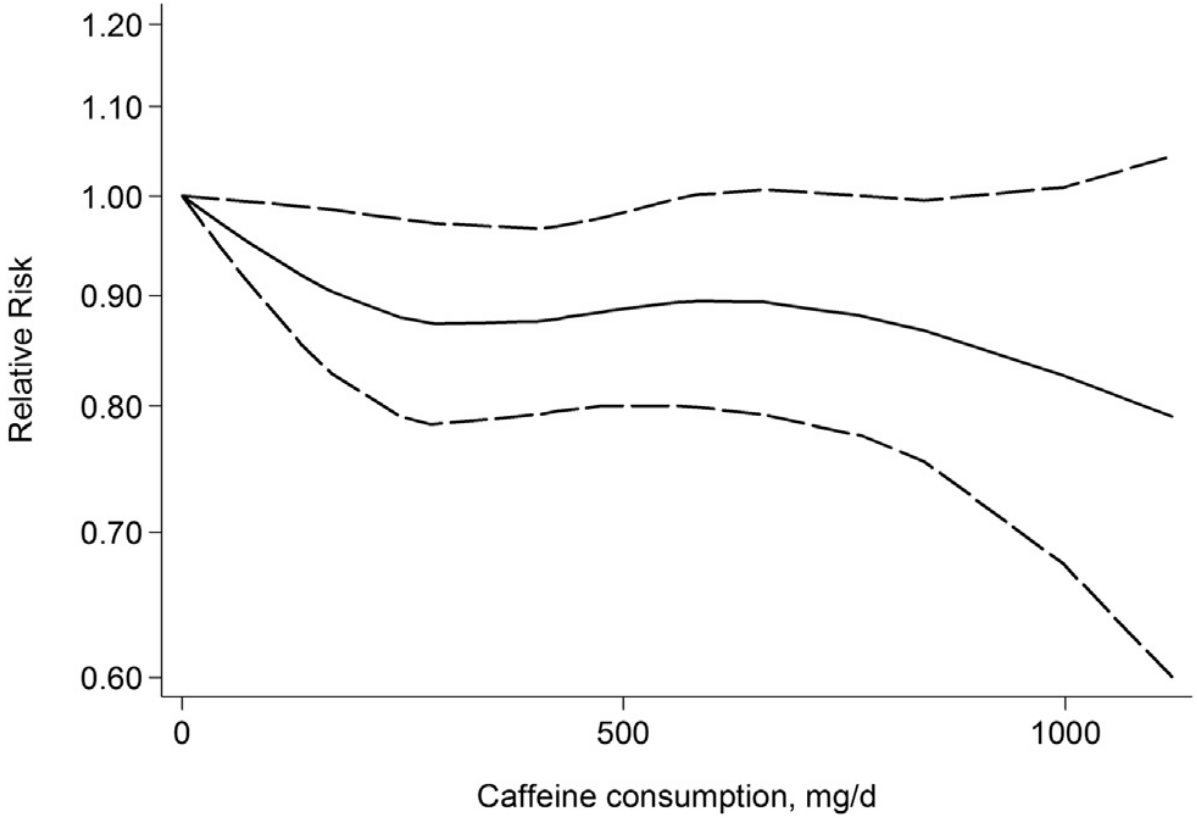
- 178 pts BMI >27 randomised to intervention vs control



Abed et al JAMA 2013

Caffeine and AF

- Meta analysis 6 studies, 228,465 pts



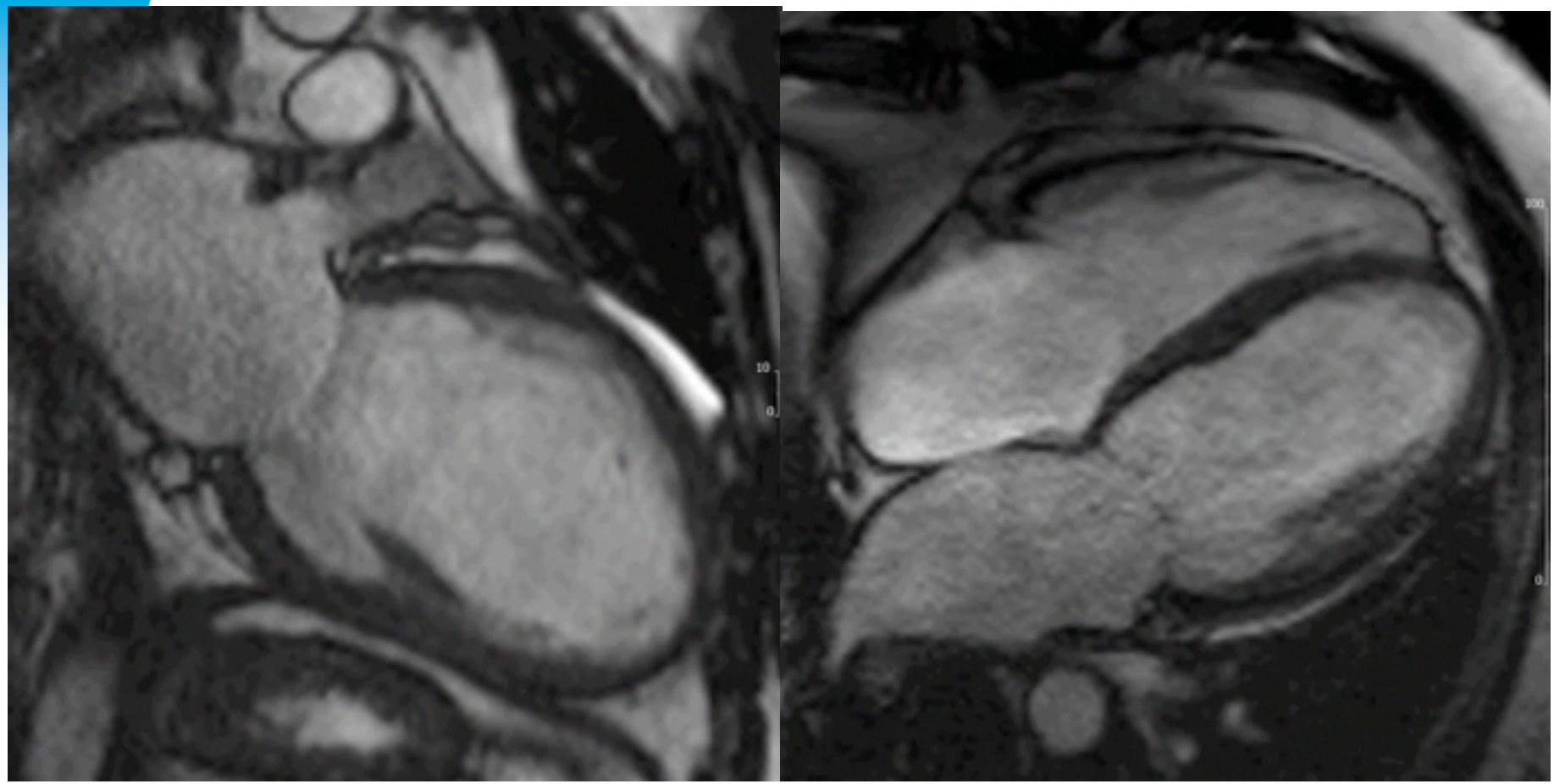
Cheng et al Can J Cardiol 2014

Other tips

- Don’t do an echo until rate controlled
  - The history and the ECG are sufficient to prescribe flecainide
- Don’t give digoxin acutely (unless your keen for them to stay in AF)
- Don’t give magnesium
- Electrolytes are never the cause unless grossly deranged

In AF

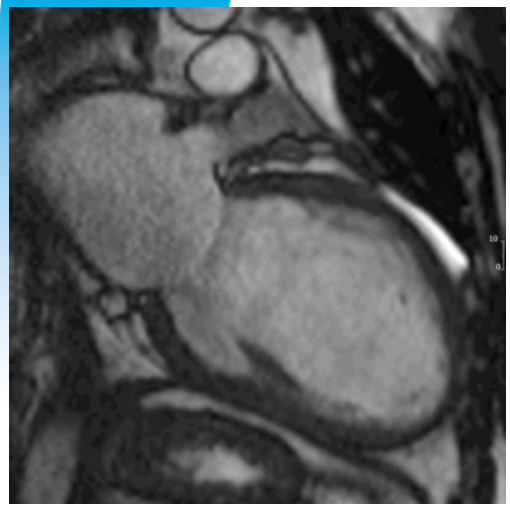
38 male 2 week incr SOB then pulmonary oedema

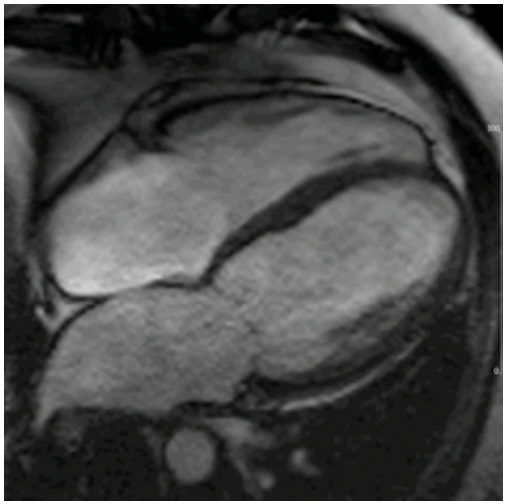


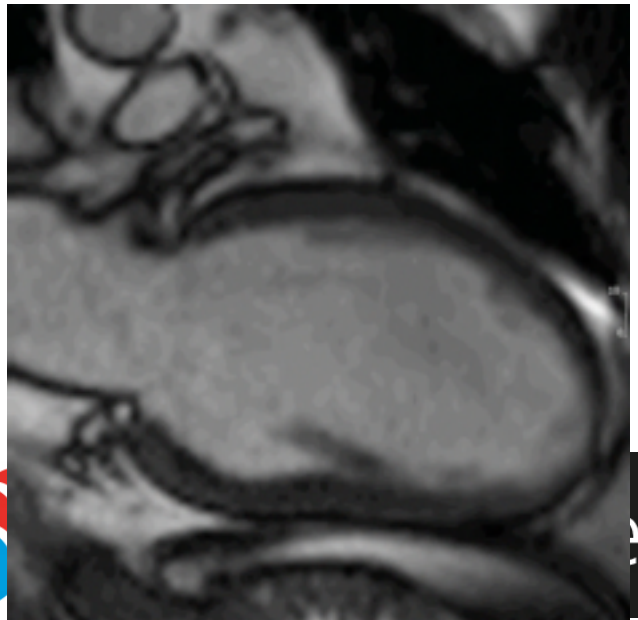
courtesy Dr Sam Mohiddin Barts Heart centre

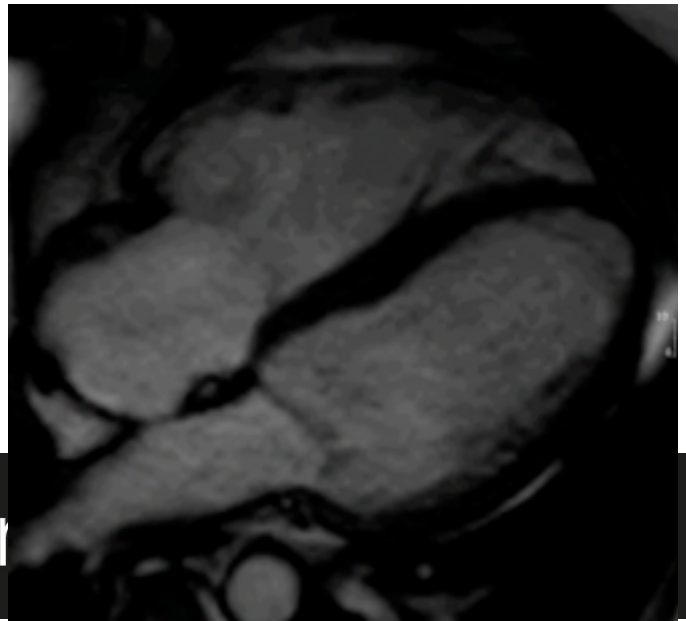
Not in AF

courtesy Dr Sam Mohiddin Barts Heart centre









Conclusions

- Calm the situation down
- Explain the problem as clearly as possible
- Slow the rate
- Prevent stroke
- Reduce AF risks
- Consider rhythm control
- Make a medium term plan with the patient