Atrial Fibrillation

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WY Regional FY2 Teaching

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Objectives & Outcomes

- Familiarize and revise
- Cases
- Classification
- Presentation and management

Prevalence

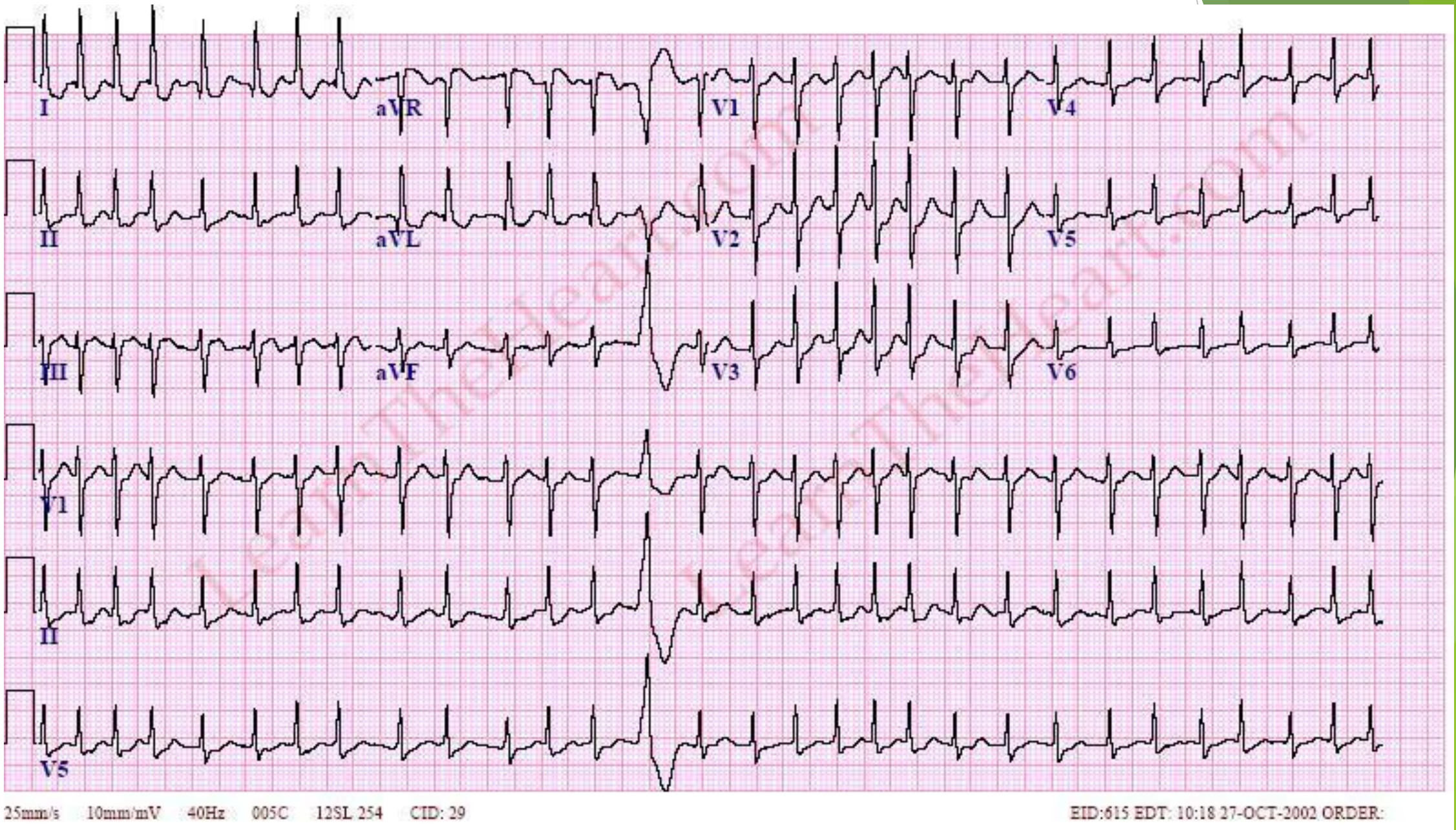
- Most common sustained arrhythmia
- %
- Higher in > 65

Classification

- 1st / Recurrent
- Self terminating/ Not
- Symptomatic/ Asymptomatic
- Paroxysmal/ Persistent/ Permanent
- Lone/ Idiopathic

Scenario 1

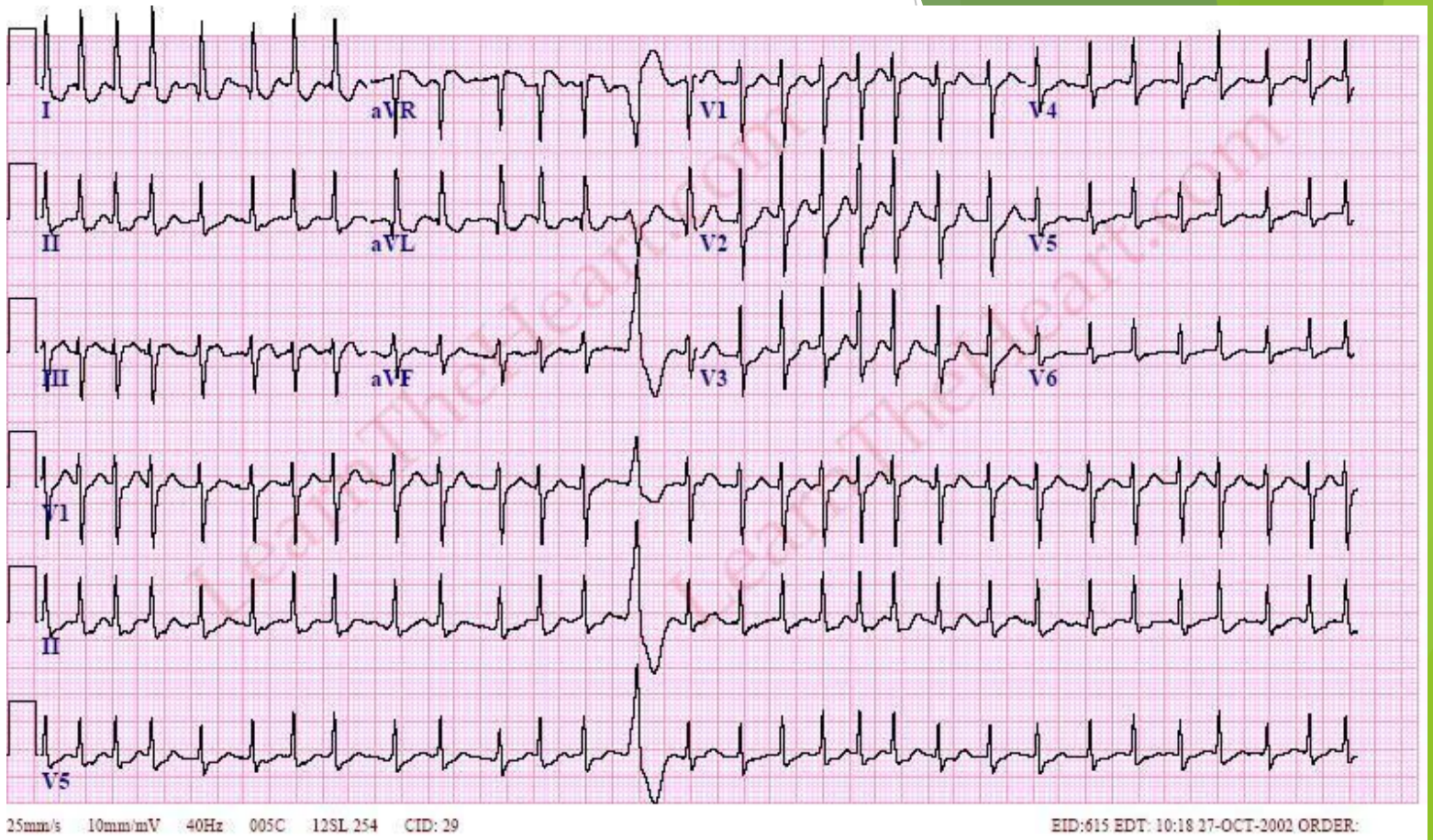
- 88 F, Breathless, cough, sputum, 1/52
- BG: HTN, COPD
- O/E pulse 130, BP 109/70, RR 22, SpO2 90% 2L O2
- ABG: pH 7.29, Pco2 9.1, Po2 8.2, HCO3 35.
- Chest: bilateral wheeze and crept at bases
- CXR: hyper-inflated lung fields, Right LZ consolidation
- ECG
- How would you manage?


I
aVR
V1
V4
II
aVL
V2
V5
III
aVF
V3
V6
V1
II
V5
25mm/s 10mm/mV 40Hz 005C 12SL 254 CID: 29
EID:615 EDT: 10:18 27-OCT-2002 ORDER:

ECG

Features

1) Irregularly irregular rhythm.
2) No formed/regular P waves.
3) Absence of an isoelectric baseline.
4) Variable ventricular rate.
5) QRS complexes usually < 120 ms
6) Fibrillatory waves may be present and can be either fine (amplitude < 0.5mm) or coarse (amplitude >0.5mm). May mimic P waves leading to misdiagnosis.



Causes

- Common (HTN/ LVF/ CAD/ Valvular / HOCM)
- Reversible (Alcohol/ Pneumonia/ Thyroid/ -itis/ COPD/ PE/ cardiac surgery)
- Rare (Congenital/ Metastases/ Effusion/ Infiltration/ Myxoma)

Presentation

- Palpitations
- Dyspnea
- Fatigue
- Pre-syncope/ syncope
- Chest pain
- Incidental finding %?

Risk Stratification for Stroke Prevention Rx

Table 1: Stroke and bleeding risk stratification with the CHA_2DS_2-VASc and HAS-BLED schemas

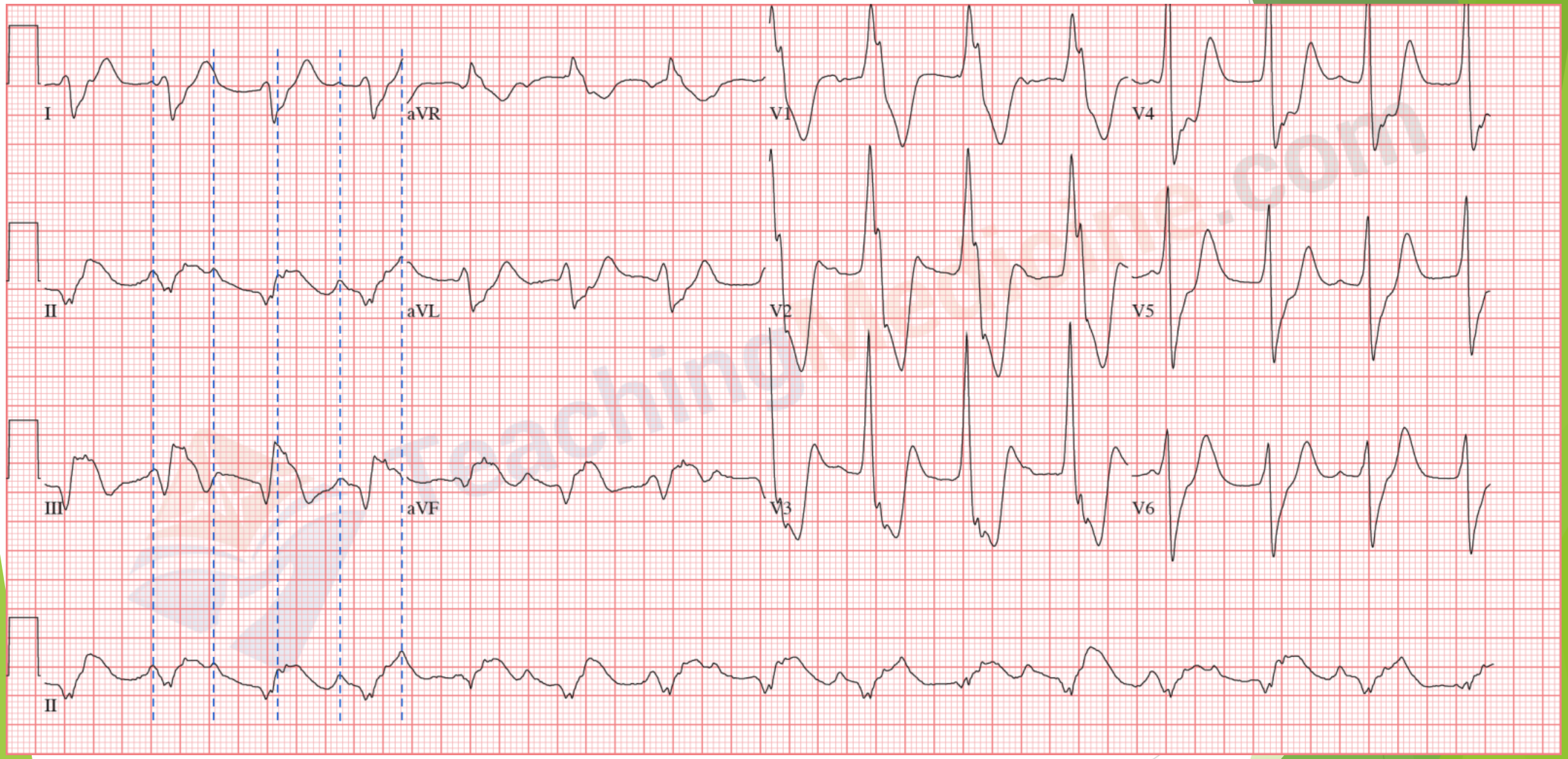
CHA_2DS_2-VASc	Score	HAS-BLED	Score
Congestive heart failure/LV dysfunction	1	Hypertension i.e. uncontrolled BP	1
Hypertension	1	Abnormal renal/liver function	1 or 2
Aged ≥75 years	2	Stroke	1
Diabetes mellitus	1	Bleeding tendency or predisposition	1
Stroke/TIA/TE	2	Labile INR	1
Vascular disease [prior MI, PAD, or aortic plaque]	1	Age (e.g. >65)	1
Aged 65-74 years	1	Drugs (e.g. concomitant aspirin or NSAIDSs) or alcohol	1
Sex category [i.e. female gender]	1		
Maximum score	**9**		**9**

Investigation

- ECG
- Echo
- Bloods: TFT/ U&E/ cardiac markers
- CXR
- Drug Level
- Ambulatory ECG/ Exercise test/ Angiogram/ MRI

Scenario

- 72 M, Pre-syncopal symptoms,
- BG: IHD, AF, PVD, T2DM. Ex-smoker
- Pulse 42, BP 94/60
- Chest clear
- HS normal.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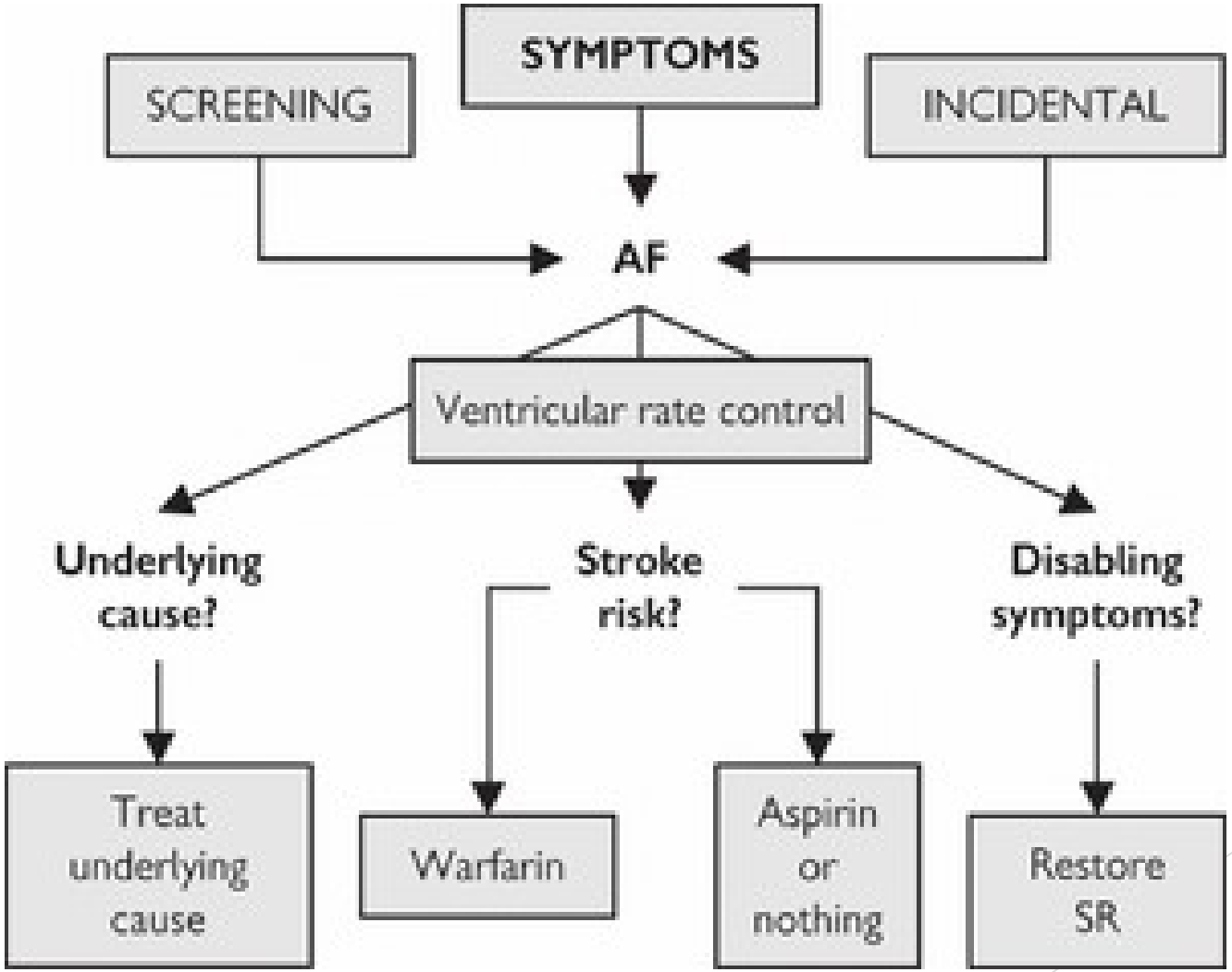
Management


SYMPTOMS
SCREENING
INCIDENTAL
AF
Ventricular rate control
Underlying cause?
Stroke risk?
Disabling symptoms?
Treat underlying cause
Warfarin
Aspirin or nothing
Restore SR

Management (cont..)

- Emergency
- Stable

1. Rate
2. Rhythm
3. Anticoagulation

Management (cont..)

Rate Control

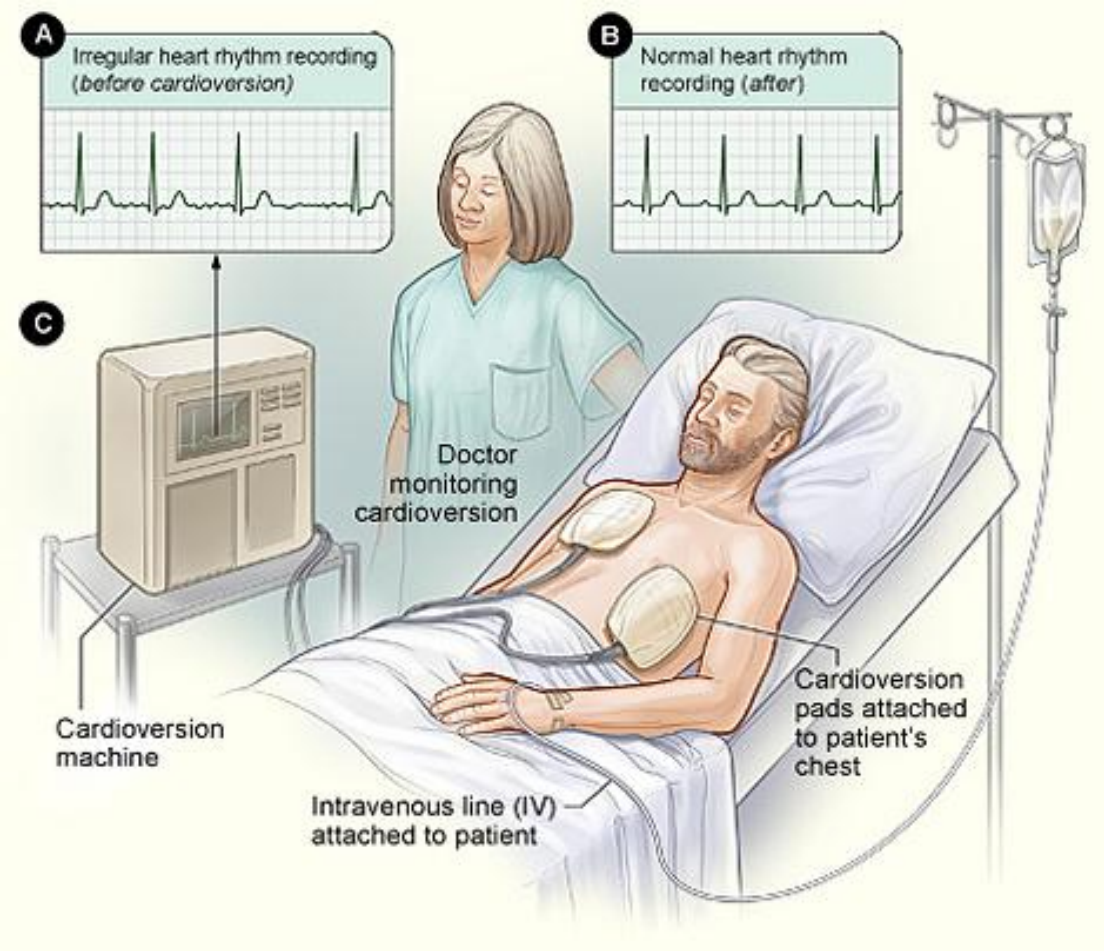
1) Beta blockers
2) Calcium channel blockers
3) Digoxin

Management (cont..)

Rhythm Control

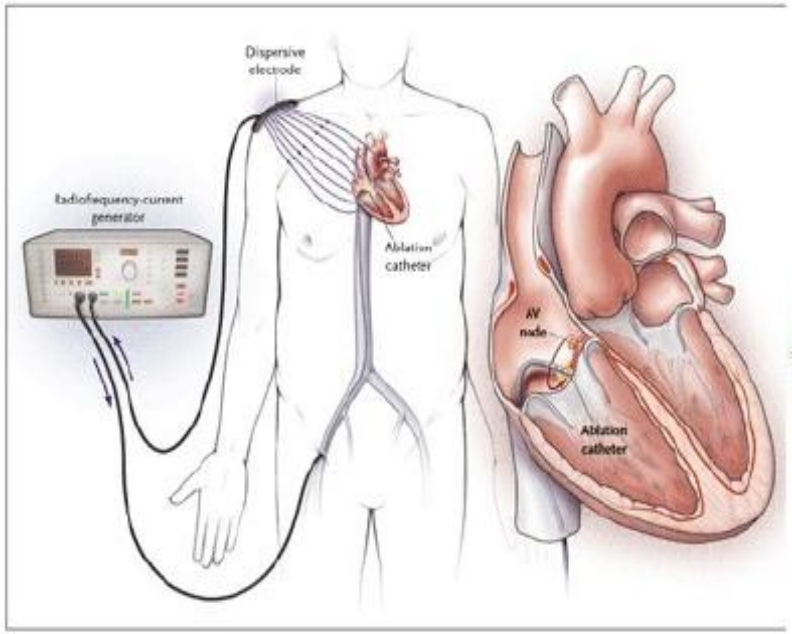
1. Electrical Cardioversion
2. Pharmacological Cardioversion
3. Surgical Ablation/ Pacemaker

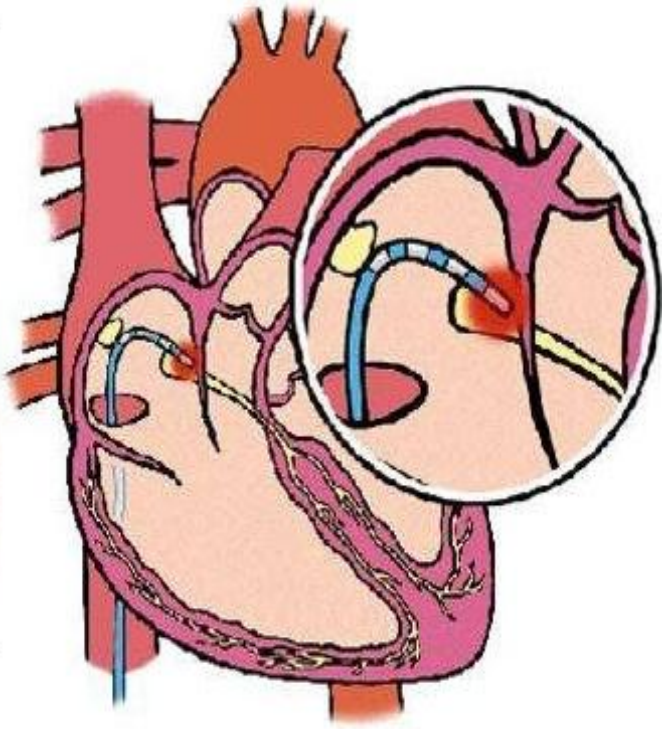
DC Cardioversion for AF



- Poorly tolerated AF
- Lone AF
- AF with haemodynamic compromise
- AF with unstable heart failure
- Anticoagulation essential to prevent TE event

Radiofrequency Catheter Ablation





- Drug refractory, poorly tolerated AF
- Patient preference
- Proper case selection
- ~50% recurrence rate at 10 years

Management (cont..)

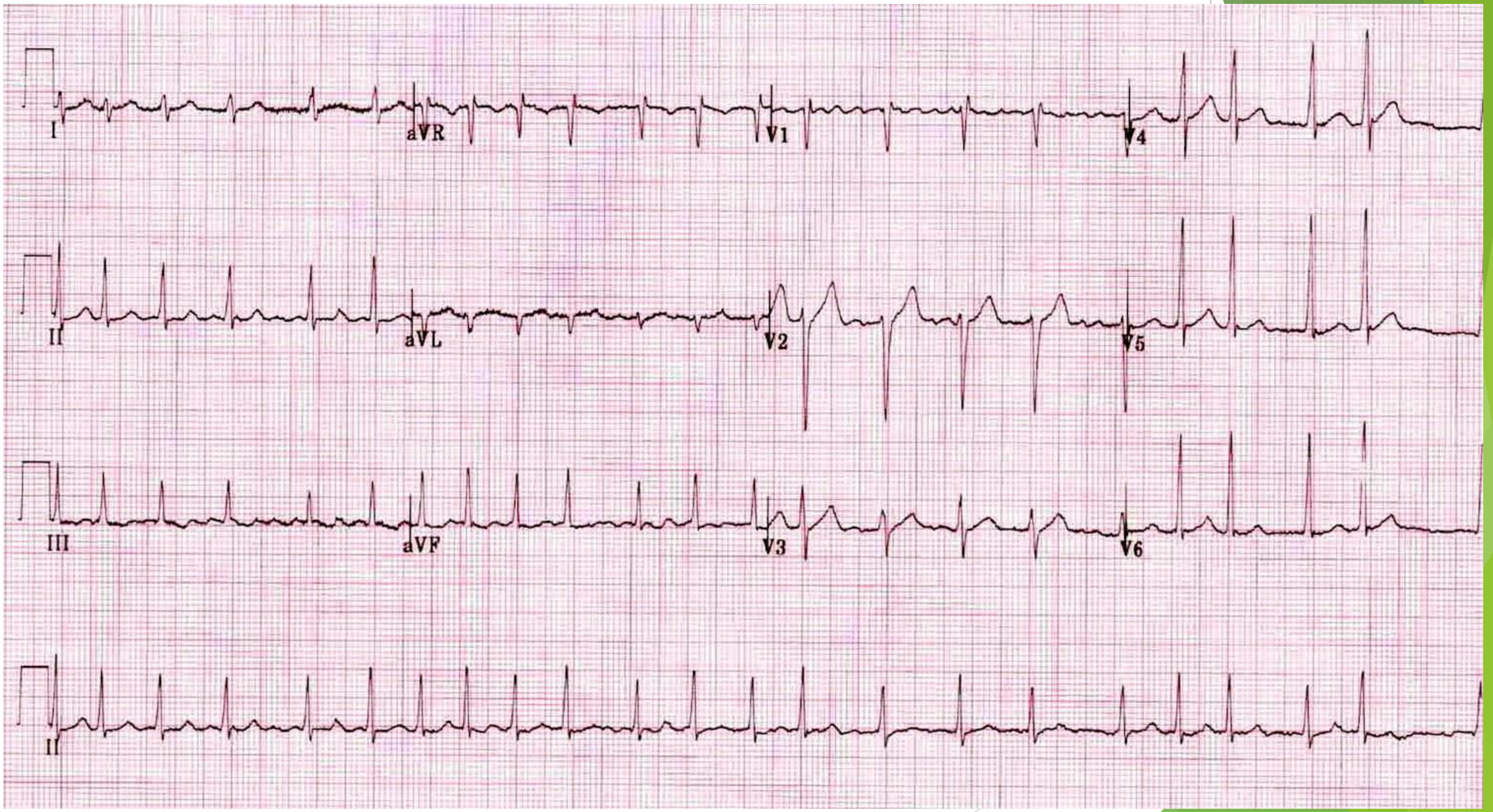
- Anticoagulation- reduces the risk of stroke by %
- Agents which one?
- Can we use aspirin/ Clopidogrel?


READY FOR A
QUIZ?

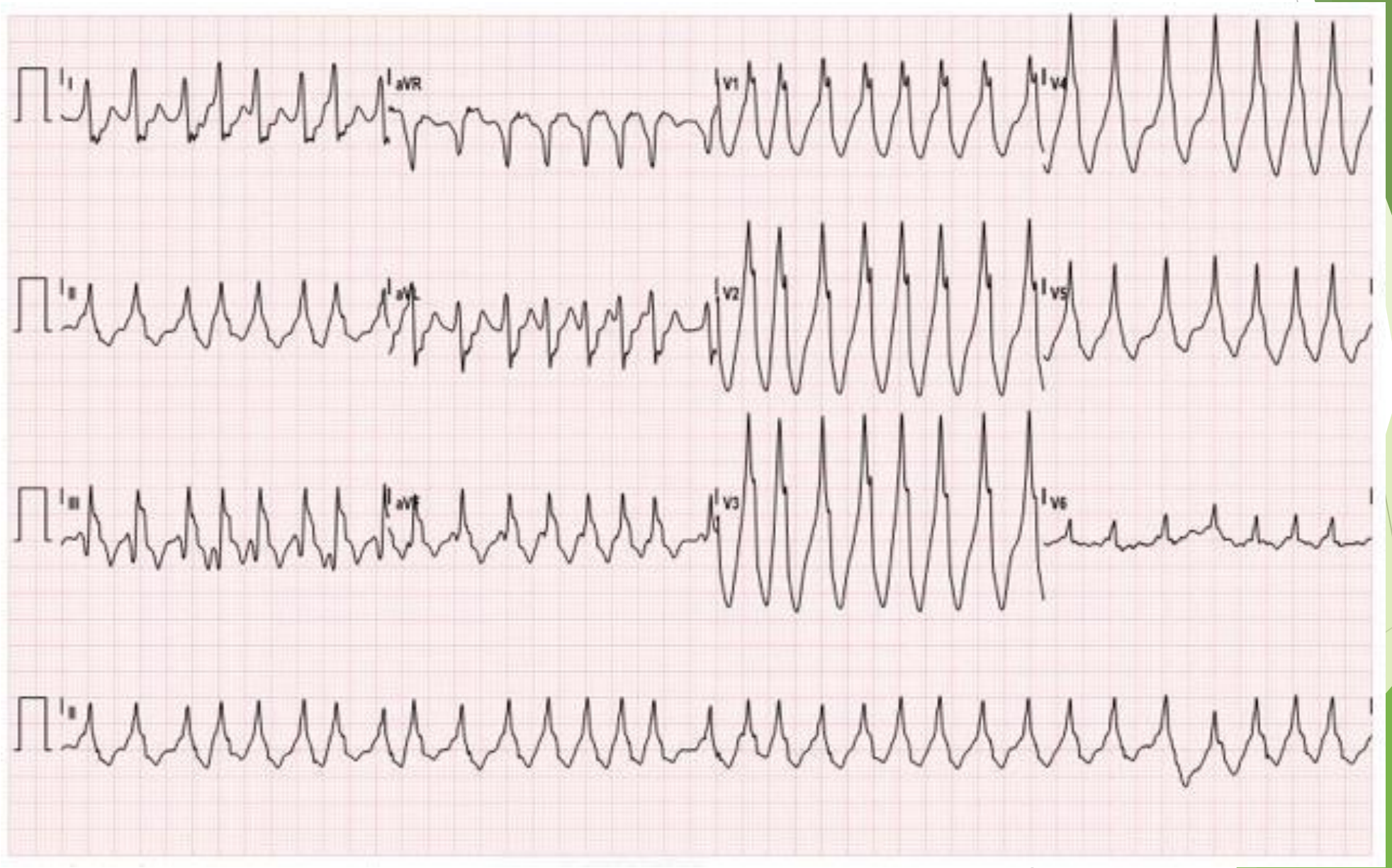
Scenario 3.

- 23 M, sudden palpitations,
- BG: nil to note
- Pulse 120, BP 110/85
- Clinical examination- unremarkable.

Scenario 3.



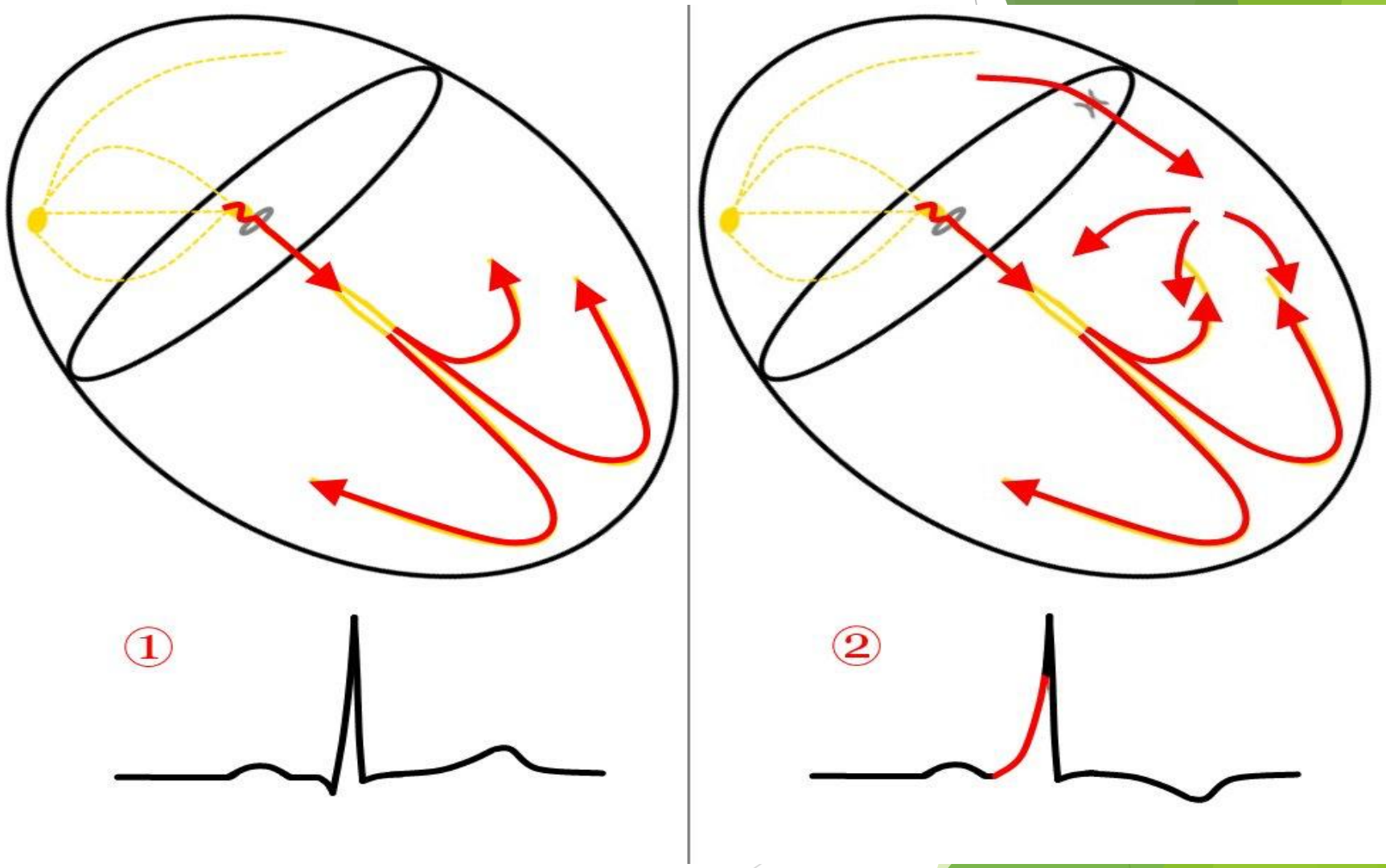
AF with ?

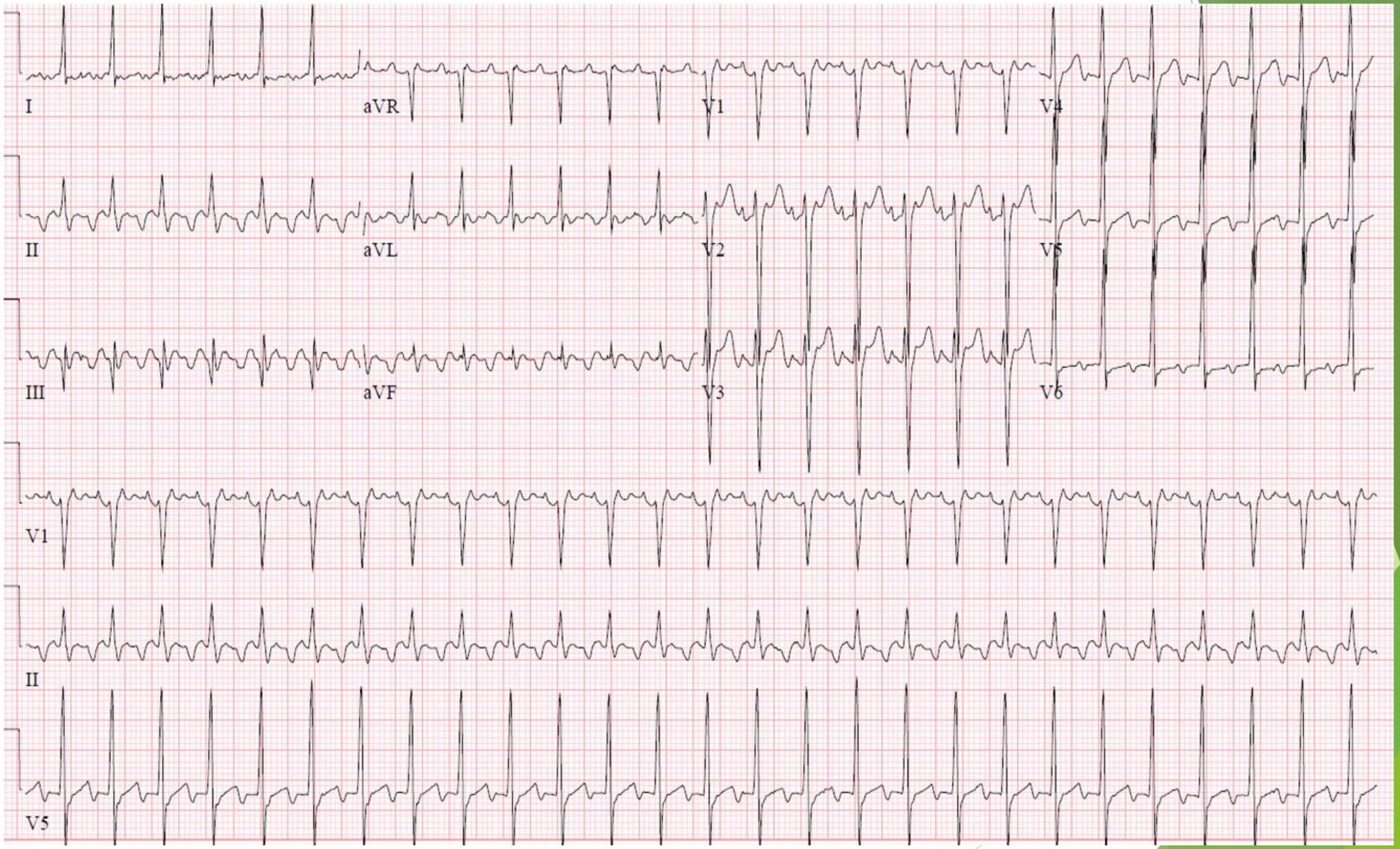



HMMM....
imgflip.com
photo by Sergei Gladyshev

AF with WPW

- Delta wave
- Higher ventricular rate
- Avoid AVN blockers

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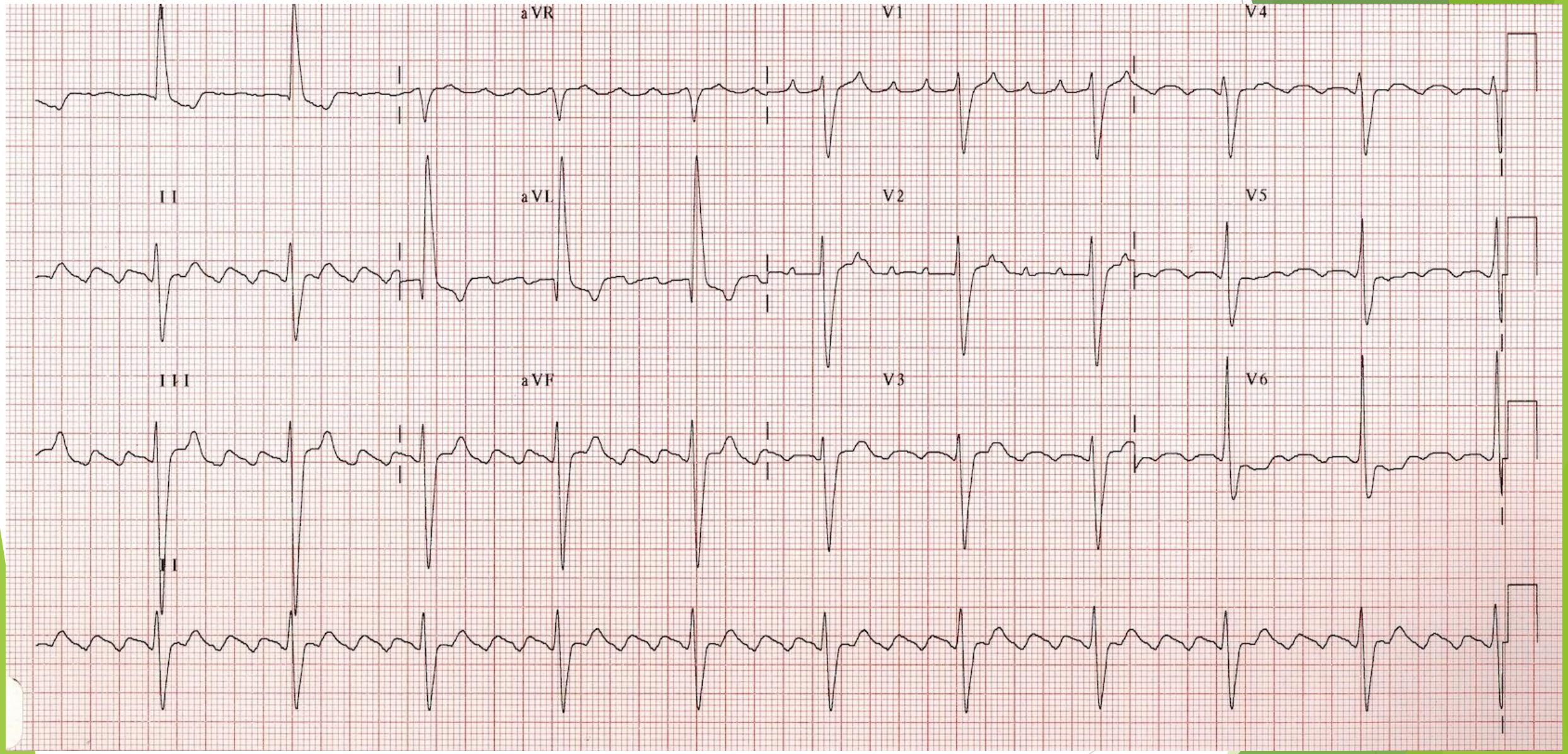
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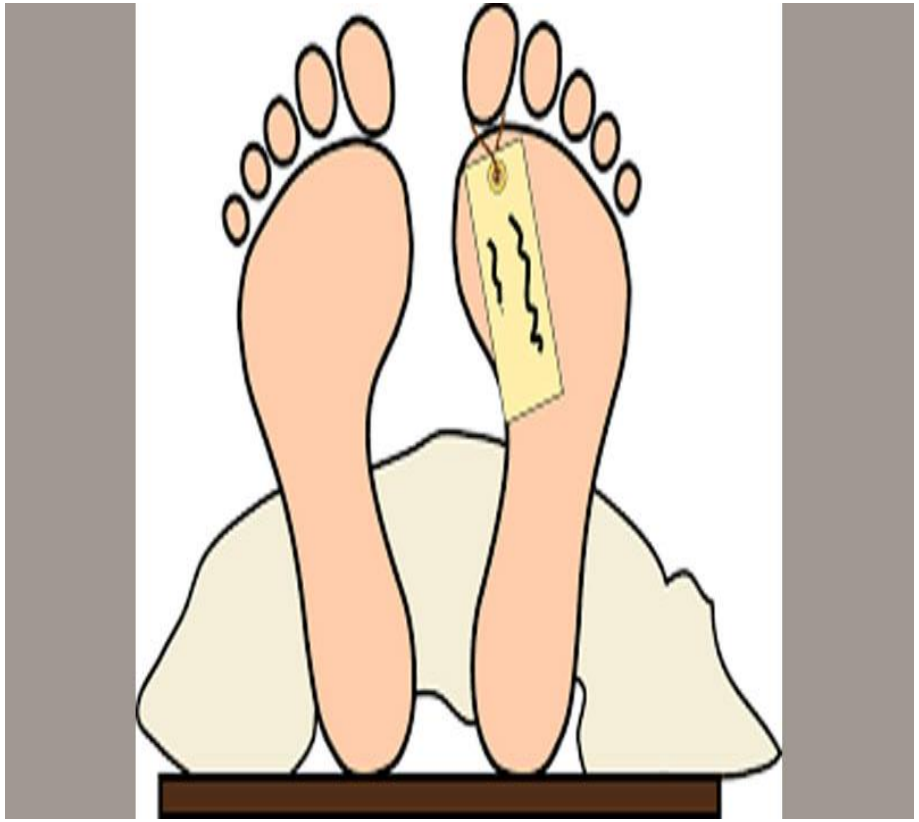
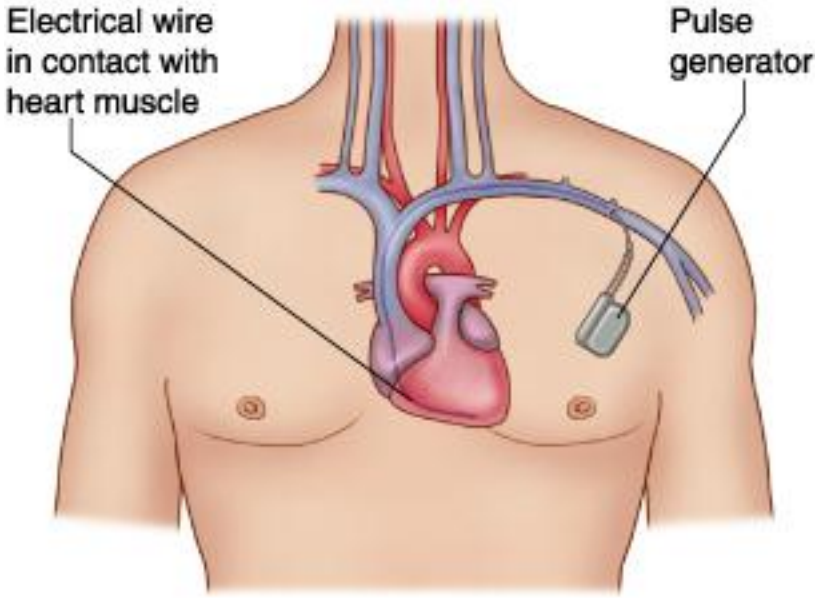
Overtreatment…….





Key messages

- Identify cause
- Use telemetry- where indicated
- Involve cardiologist where necessary
- Anticoagulation- informed choice
- Treat your patient- do not over treat (esp secondary causes-Pneumonia, PE, Sepsis, Cellulitis etc)
- Primary care-Routine pulse check per NICE guidance 2014

Questions

Thank you