

BHRS Prep course Pub style Quiz



No Beer and no Prizes

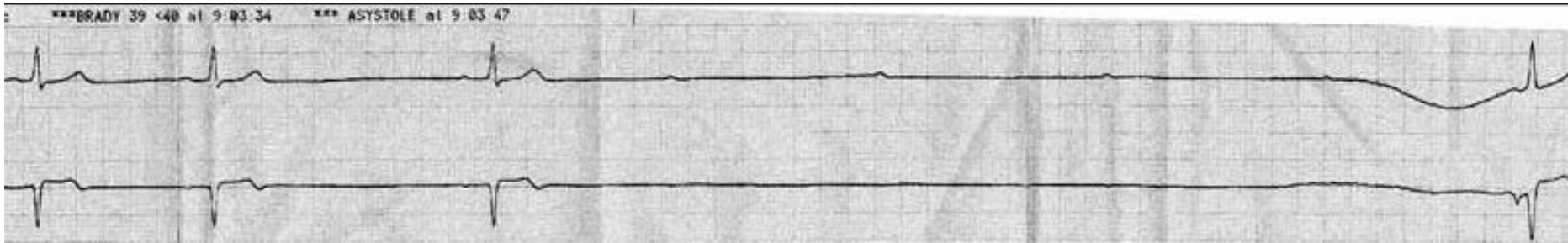
NOT A PUB QUIZ



Round 1 Quiz questions

Common ECG's in CRM

Colin Cunnington

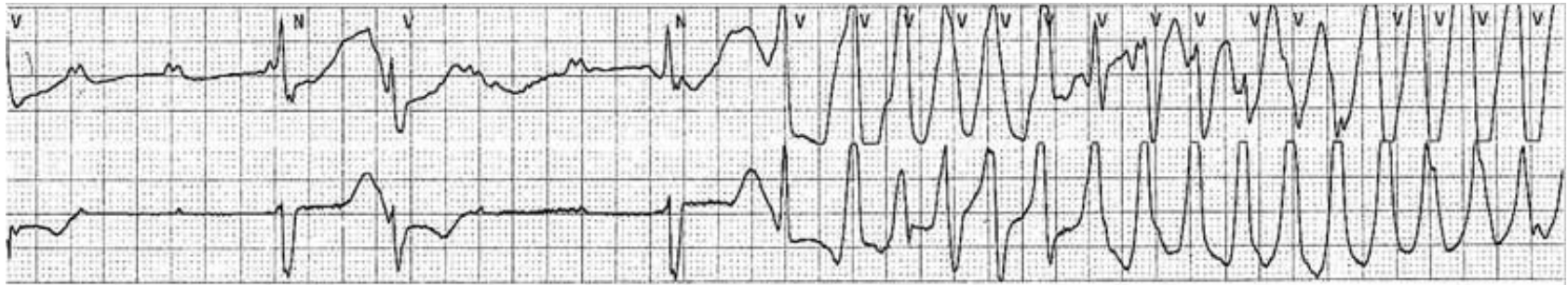


▶ Over the past 3 months, a 24-year-old man who works as a truck driver has had frequent episodes of pre-syncope and syncope, particularly when standing. A recording obtained during tilt-table testing is shown.

▶ Which of the following is the most likely diagnosis?

- A Artifact
- B Complete AV block
- C Isorhythmic AV dissociation
- D Neurocardiogenic syncope
- E Sick sinus syndrome

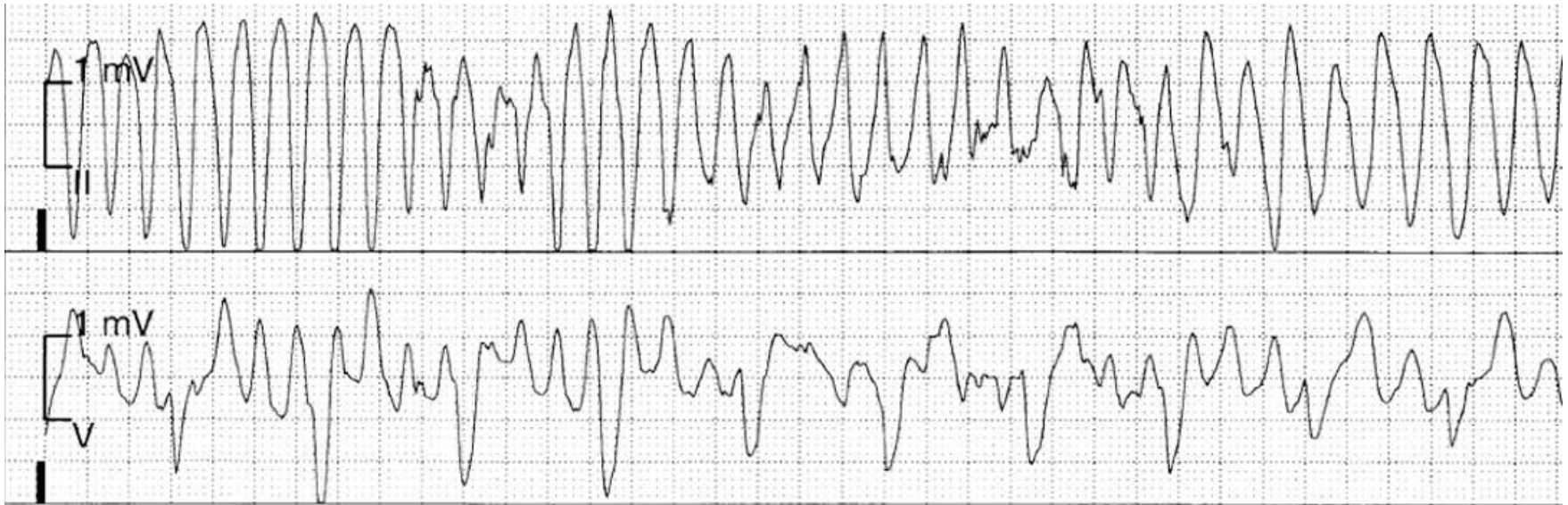




- ▶ A 70-year-old woman with paroxysmal AF and bifascicular block has frequent episodes of syncope over the past 2 days. The episodes began after she began taking her medication (sotalol 80mg twice daily).
- ▶ What is the most appropriate management?

- A Continue sotalol and implant PPM
- B Continue sotalol and implant temporary pacemaker
- C Continue sotalol and implant ICD
- D Discontinue sotalol and implant ICD
- E Discontinue sotalol without device implantation



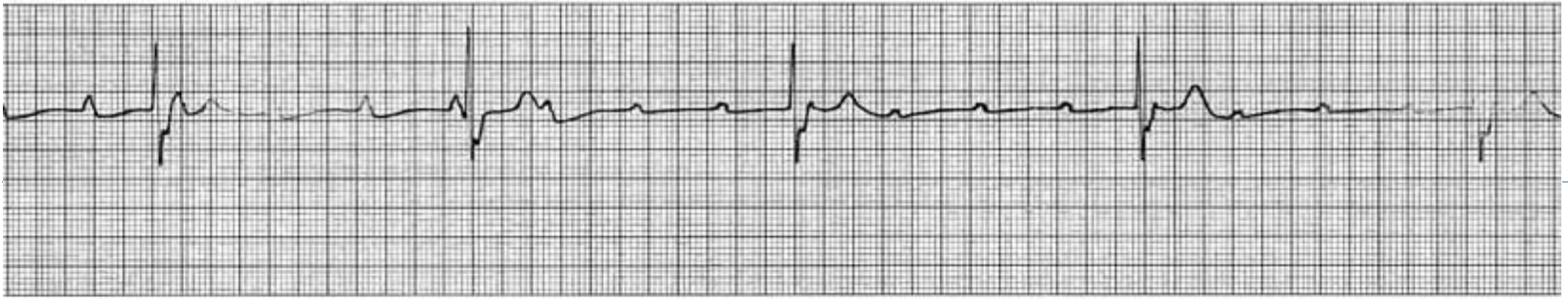


▶ A 75-year-old woman has a past history of anterior MI in 2005. In 2007 she had an aborted cardiac arrest, and a single-chamber ICD was implanted. She is readmitted to hospital with unstable angina and is waiting for an angiogram. You are asked to evaluate her ICD because of the 2-channel rhythm strip shown.

▶ What is the most likely finding on device interrogation?

- A Poor ventricular sensing
- B Poor ventricular sensing and capture, since the V lead has become displaced and is causing polymorphic ectopy
- C Battery failure with run-away pacing from ICD
- D Normal ICD evaluation
- E Supraventricular tachycardia with aberrancy

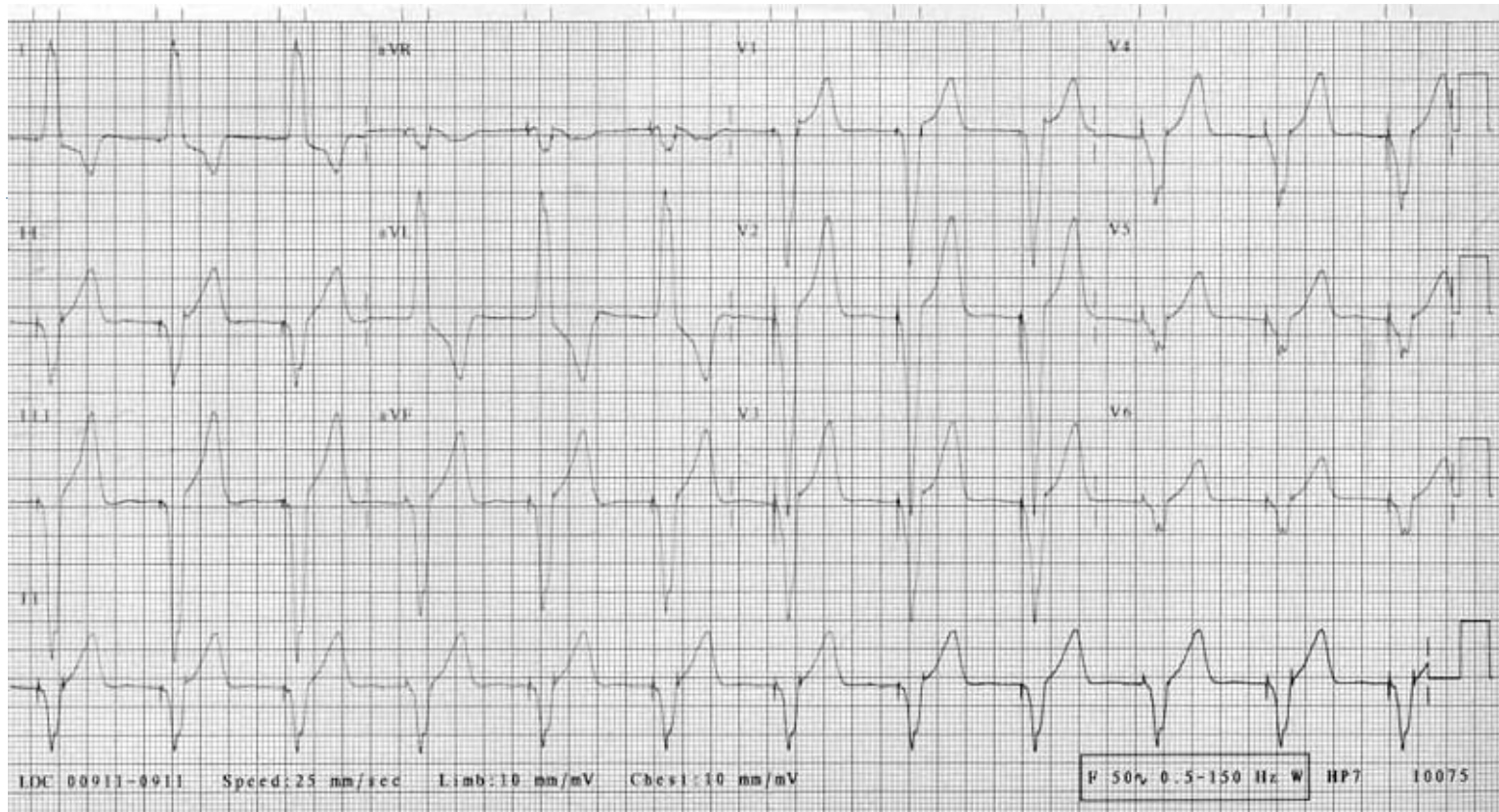





- ▶ A 63-year-old man has no signs of structural heart disease.
- ▶ Based on the recording shown, which of the following is the most appropriate mode of pacing to maintain AV synchrony?

- A AAIR
- B DDI
- C DDIR
- D VDD
- E VVIR




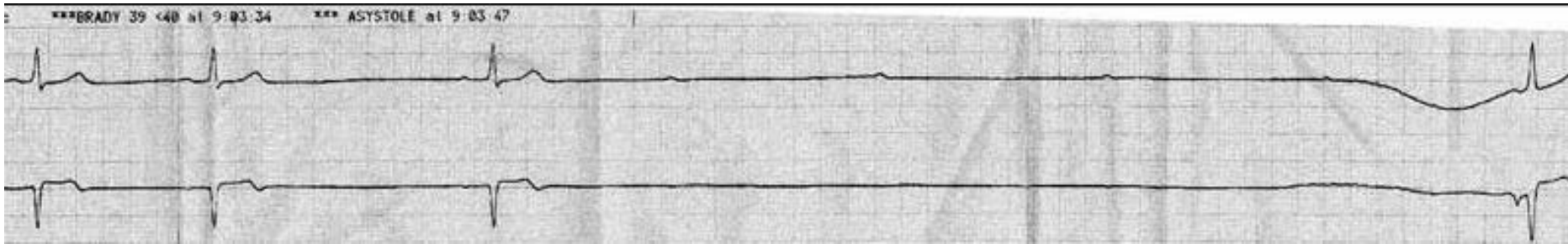


- ▶ Which of the following is the most likely explanation for the findings shown on the ECG recording obtained one hour after a 45-year-old man underwent implantation of a pacemaker?
- A Reversal of A and V pins in the pacemaker
 - B Dual-chamber pacing is normal
 - C Pulse generator has failed
 - D Pulse generator set screws are not tightened
 - E Ventricular lead has displaced



Round 1 Answers



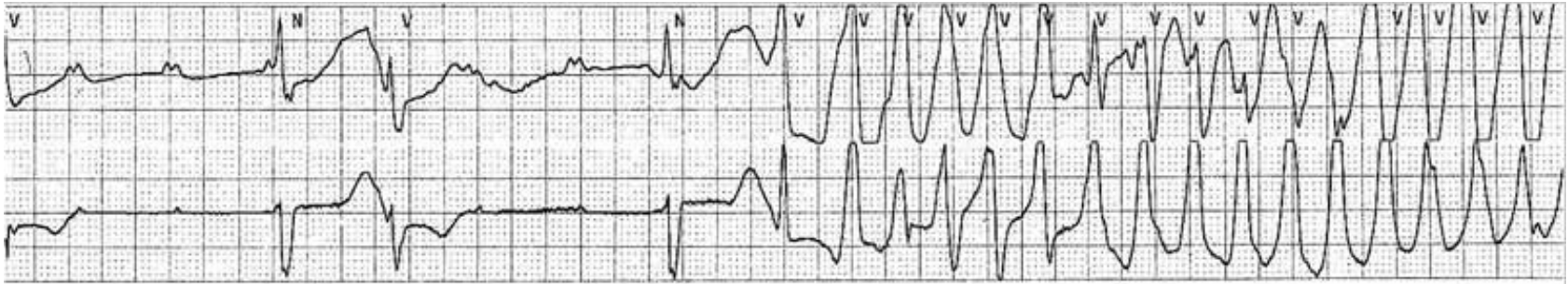


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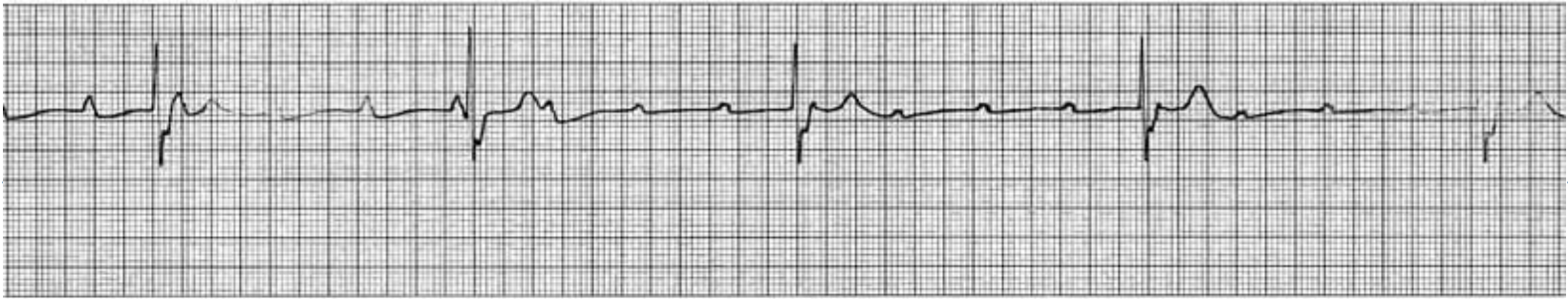
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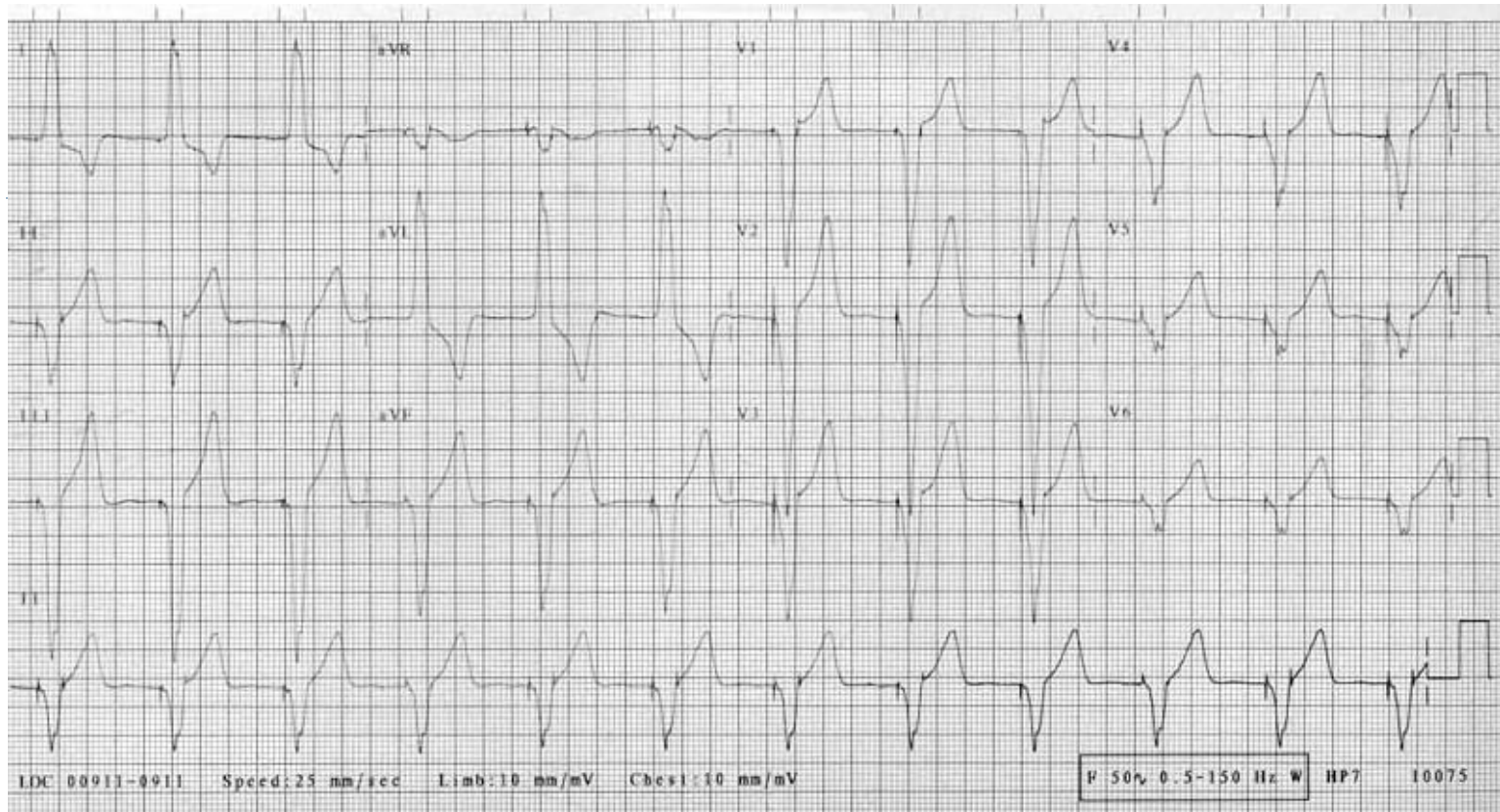
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|---|------|
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| B | DDI |
| C | DDIR |
| D | VDD |
| E | VVIR |



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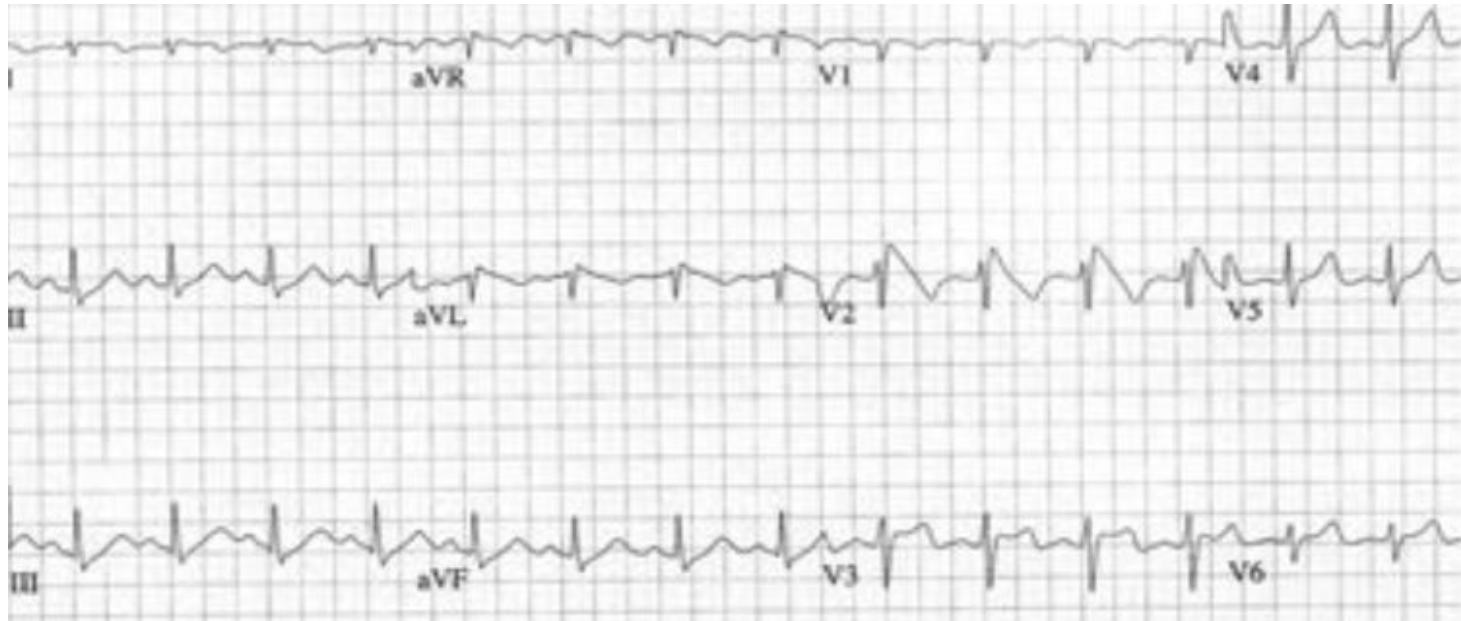


Cardiology quiz questions Round 2



Pharmacology

Question 1



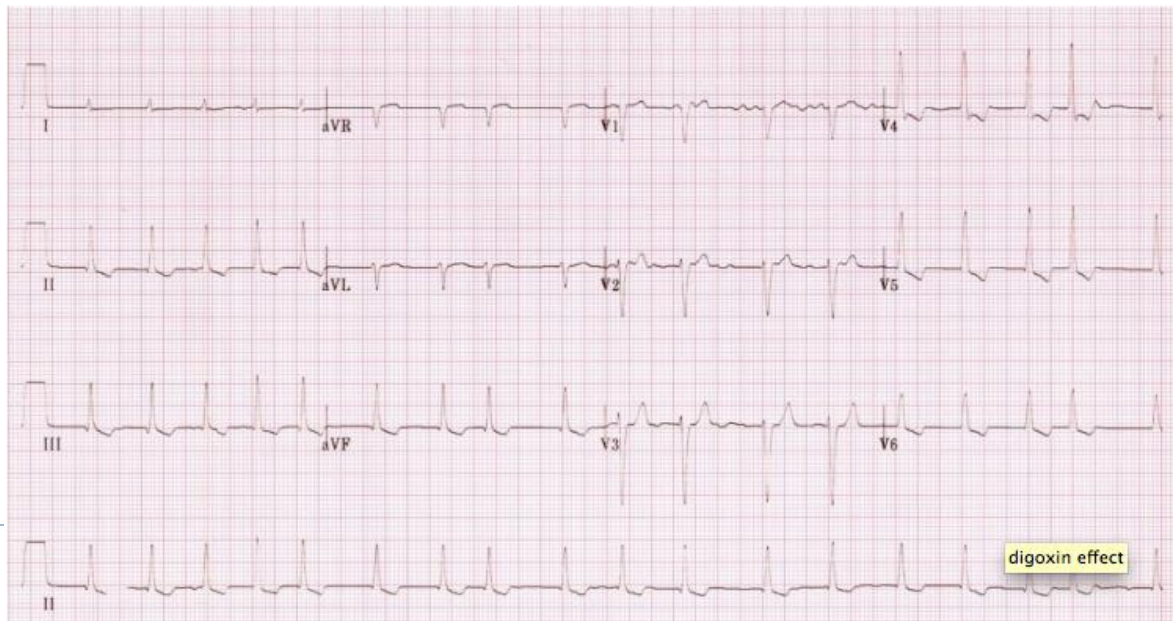
A 24 year old man with a history of collapse is admitted for provocation testing. Which class of drug is likely to have been administered to result in these ECG changes?

- A. Class III
- B. Class IC
- C. Class IB
- D. Class IV
- E. Class II

Question 2

Which drug is likely to have resulted in these ECG changes?

- A. Procainamide
- B. Flecainide
- C. Verapamil
- D. Digoxin
- E. Amiodarone



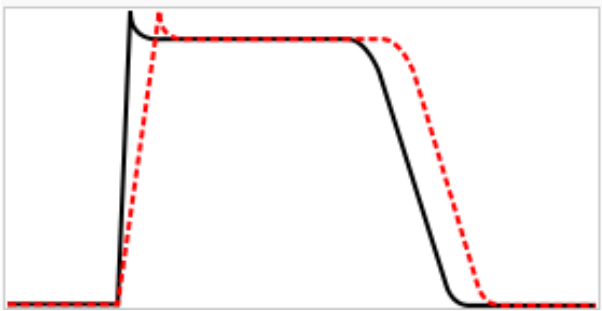
Question 3

- ▶ A 72 year old man with heart failure was commenced on a new tablet at his last cardiology appointment. He now complains of “yellow vision”. Which of the following drugs is most likely to be responsible for this symptom?
 - A. Amiodarone
 - B. Digoxin
 - C. Ivabradine
 - D. Propafenone
 - E. Spironolactone

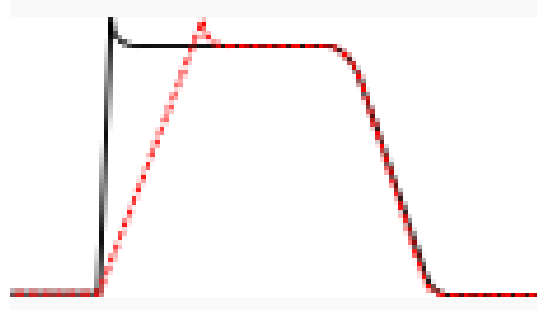


Question 4

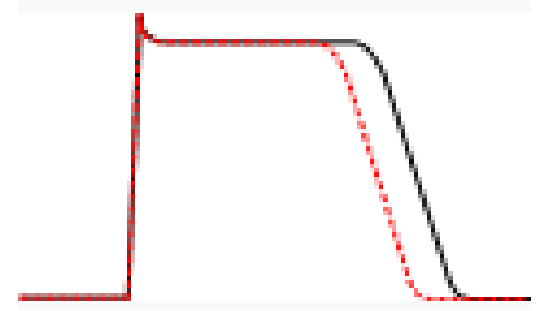
- ▶ Which of the following figures depicts the effects of lidocaine on the cardiomyocyte action potential?



A



B



C

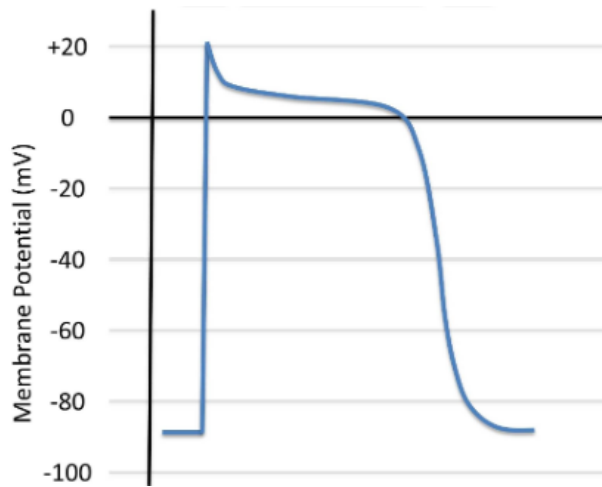
D. Lidocaine doesn't effect the action potential

E. None of the above

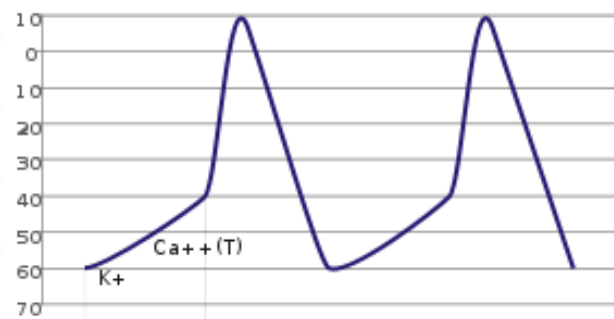
Question 5

Which of the following depicts the action potential of a pacemaker cell?

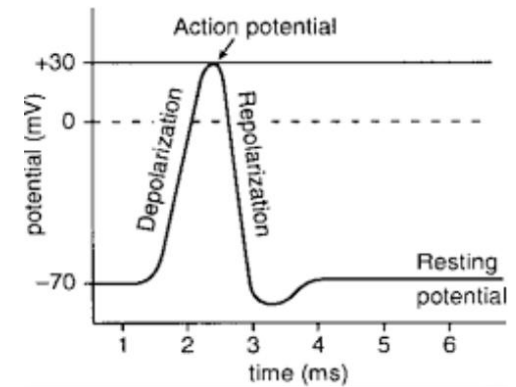
A.



B.



C.



D. None of the above

E. Pacemaker cells don't have action potentials



Round 2 Drugs in Cardiology
Answers



Question 1



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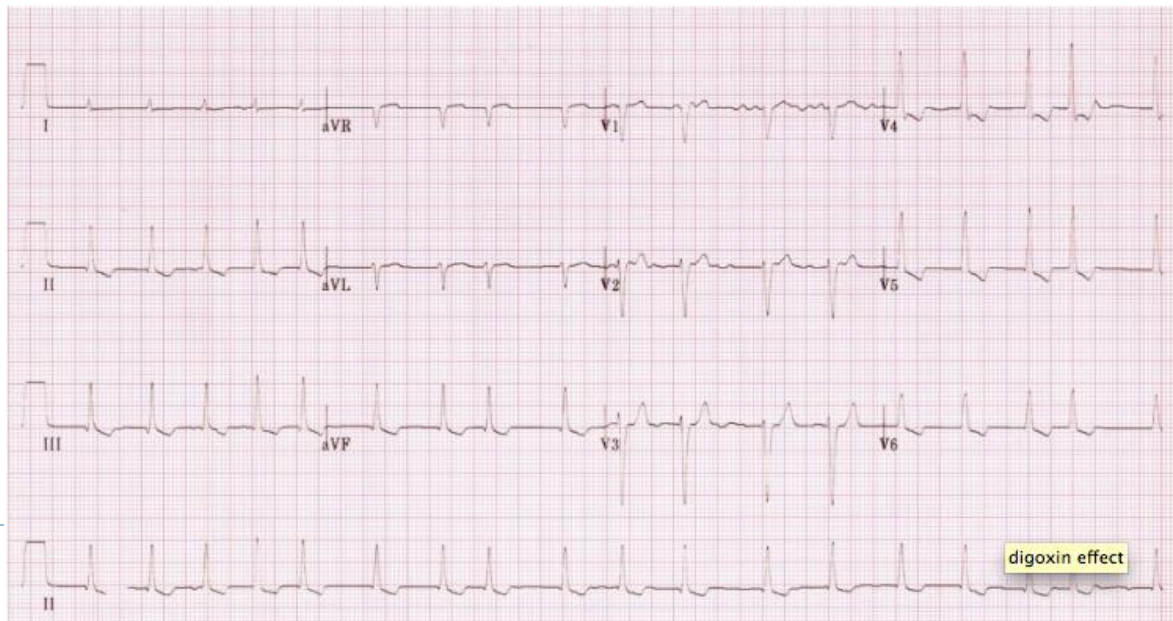
- A. Class III
- B. Class IC**
- C. Class IB
- D. Class IV
- E. Class II

Flecainide challenge is most commonly used in the U.K although Ajmaline class Ia may also be used.

Question 2

Which drug is likely to have resulted in these ECG changes?

- A. Procainamide
- B. Flecainide
- C. Verapamil
- D. Digoxin**
- E. Amiodarone



Question 2

D. Answer Digoxin toxicity

- ▶ There is downsloping ST depression
- ▶ There is also J-point depression in V4-6, which mimics the appearance of LVH
- ▶ The short QT interval, the “sagging” appearance in the inferior leads and the lack of voltage criteria for LVH indicates that this is digoxin effect rather than LVH.



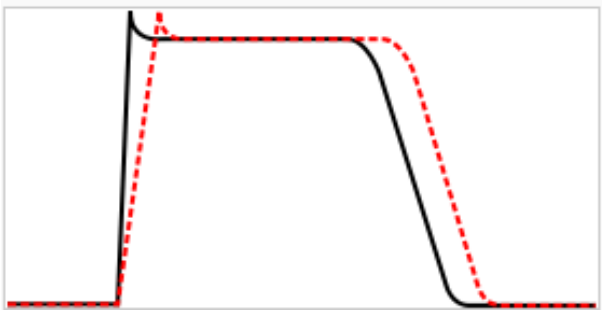
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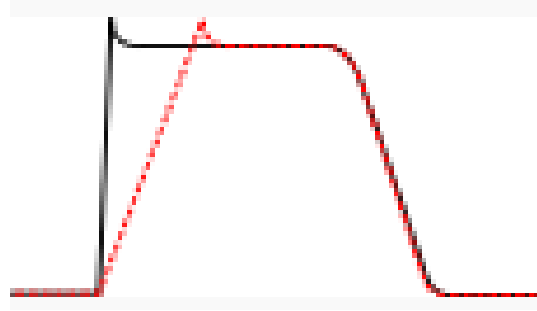


Question 4

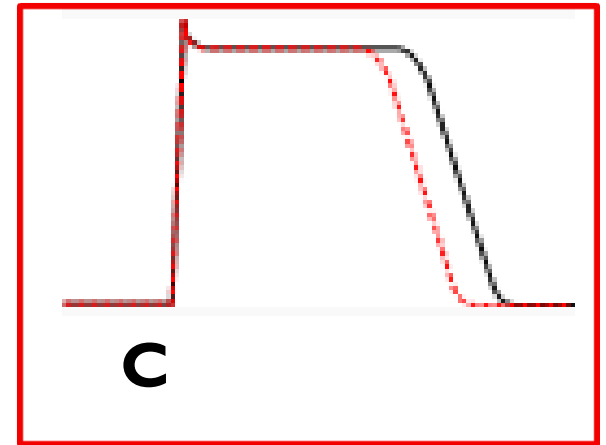
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A



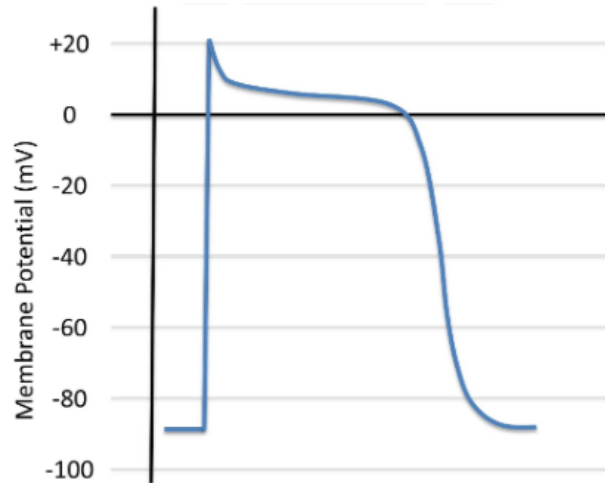
B



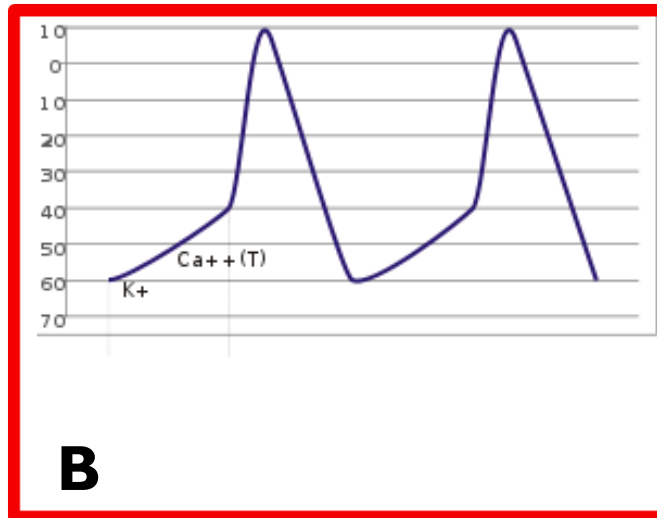
C

C. Lidocaine is a class IB agent, which is a weak Na channel blocker that also decreases the ERP and action potential duration.

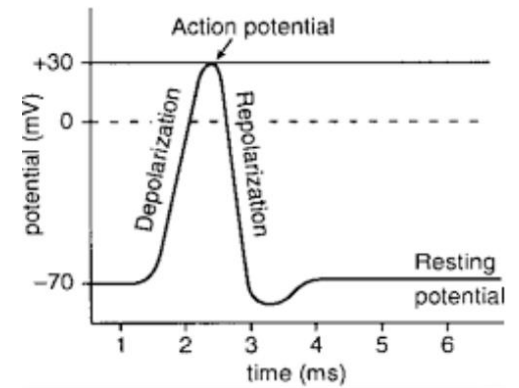
Q5. Which of the following depicts the action potential of a pacemaker cell?



A



B



C





Round 3
Interpreting EP signals

A H-V Interval is correctly measured by;

- A. Measuring from the onset of P wave to Q wave on the surface ECG
- B. Measuring from the HRA egm to the His spike on the His channel
- C. Measuring from the atrial egm on the His channel to the His spike on the His channel
- D. Measuring from the Atrial egm on the CS channel to the His spike
- E. Measuring from the His spike to the onset of the first V signal on any channel



Atrial Flutter which type of arrhythmia?

- A. Focal
- B. Triggered activity
- C. An unusual one
- D. Macro Re-entrant
- E. Micro Re-entrant



In LAO view the CS Electrode is?

- A. Not seen it's obscured by another catheter
- B. Foreshortened
- C. Seen in it's full length
- D. Seen intermittently with cardiac movement
- E. Seen as a W shape



During an anterograde curve in a patient with normal conduction and anatomy the AH interval will?

- A. Shorten the S2 beat is delivered
- B. Extend earlier the S2 beats is delivered
- C. Remain constant throughout
- D. Vary wildly from beat to beat, there's no logic to this interval
- E. You can't measure the AH interval during an anterograde curve



Dissociated Pulmonary vein potentials indicate ?

- A. The vein isn't isolated more ablation is required
- B. The vein may be isolated but more ablation is required
- C. Nothing they are irrelevant
- D. There is block between the vein and the LA
- E. Your catheters in the wrong place.





Round 3 Answers
Interpreting EP signals



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The AH interval “decrements” or extends as the coupling interval decreases.



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Question 1- DVLA

Which of the following must be reported to DVLA if you hold a Group I licence

- A. ICD Implantation for sustained VT not associated with Incapacity**
- B. Prophylactic CRT-D implantation**
- C. Dual chamber (DDD) Brady pacemaker for high grade AV Block**
- D. Implantation of an implantable loop recorder**
- E. Box change of an ICD initially implanted for an arrhythmia associated with incapacity**



Question 2 - Regulation

Who is the UK Governments designated authority for the management of implanted medical devices

- A. Medical Devices Agency**
- B. Medicines and Healthcare Products Regulatory Authority**
- C. The Department of Health**
- D. The Healthcare and Medicines Regulatory Authority**
- E. Medicines and Medical Devices Agency**



Question 3- NICE Guidance

If adhering to NICE Guidance TA314, which of the following patients must receive a CRT-D device

- A. NYHA Class I with QRS Duration <120ms**
- B. NYHA Class II with QRS Duration >150ms**
- C. NYHA Class IV with LBBB and QRS Duration >150**
- D. NYHA Class I with QRS Duration 120 → 149ms**
- E. NYHA Class III with QRS Duration 120 → 149ms**



Question 4- NICE Guidance

If adhering to NICE Guidance TA88 (2005), which of the following patients should receive a dual chamber atrial based pacing system

- A. Permanent atrial fibrillation in the context of 3rd Degree AV Block**
- B. 8 Second pauses in the context of permanent atrial fibrillation**
- C. Sick Sinus Syndrome with no evidence any impaired A V node conduction**
- D. Asymptomatic 1st Degree AV Block**
- E. Sick Sinus Syndrome in the context of 3rd Degree AV Block**



Question 5- Standards

The 2015 BHRS Standards for implantation and follow up of CRM Devices in Adults states that a highly specialist cardiac physiologist working unsupervised in a device (PPM / ICD/CRT) clinic must

- A. Perform a minimum of 250 bradycardia pacemaker system follow-up review procedures per**
- B. Hold an ALS Certificate**
- C. Have the knowledge and skills of an AFC band 5**
- D. Perform a minimum of 150 ICD/CRT follow-up review procedures per year**
- E. Attend HRC every year to demonstrate CPD**





Round 4 Guide Lines



Mark Squirrell

Question 1- DVLA

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