A 66 year old man is brought to the ED. He has been experiencing palpitations. He is comfortable at rest. His heart rate is 160/min.

What are 4 signs of instability? (2)
Reduced conscious level
Systolic BP < 90mmHG
Chest pain
Heart failure

If a patient displays these signs, what is the immediate course of action? One drug and one non drug with doses as required? (1)

*Synchronised DC shock up to 3 attempts* 

Then amiodarone 300mg IV over 10-20 mins followed by 900mg over 24 hours

The ECG shows a narrow complex tachycardia which is irregular. What key feature in the history will determine your management? (1)

Onset of arrhythmia <48 hours. If yes, cardioversion. If no, rate control

Which drugs can be used in treatment of atrial fibrillation according to the 2005 resuscitation council guidelines? (3)

Digoxin 500mcg loading dose IV

Beta-blocker oral or IV (take your pick? 25-50mg oral atenolol or 5mg IV) Both for rate control

Or Amiodarone 300mg over 20-60 mins followed by 900mg/24hrs.

On the bradycardia algorithm, what features indicate increased risk of asysole? (2)

*Heart rate* < 40

Mobitz 2

*Ventricular pauses* > 3secs

Complete heart block with wide QRS

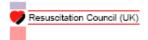
Outline initial treatment of bradycardia which has failed to respond to an initial dose of atropine. Include doses. ( 1/4 mark each) (1)

Atropine 500mcg to max of 3mg

Adrenaline 2-10mcg/min

*Transcutaneous pacing* 

Alternative drugs including isoprenaline, aminophyline, dopamine, glucagons if beta-blocker or calcium blocker, glycopyrollate can be used instead of atropine? why bother though

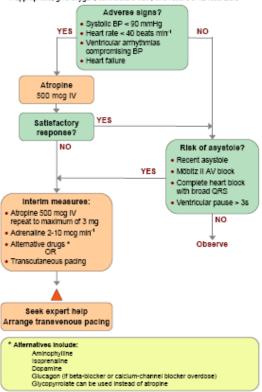


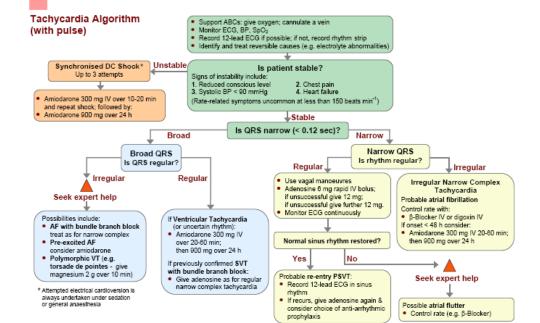
## Bradycardia Algorithm

Resuscitation Council (UK)

(Includes rates Inappropriately slow for haemodynamic state)

If appropriate, give oxygen, cannulate a vein, and record a 12-lead ECG





Possible atrial flutter
• Control rate (e.g. β-Blocker)