

Bradycardia



RISHACADEMY

educate yourself to empower yourself

www.rishacademy.com

- An abnormality of the cardiac rhythm is called a cardiac arrhythmia.
- Arrhythmias may cause sudden death, syncope, heart failure, chest pain, dizziness, palpitations or no symptoms at all.



There are two main types of arrhythmia:

- ***Bradycardia***: the heart rate is slow (<60b.p.m. during the day or <50b.p.m. at night).
- ***Tachycardia***: the heart rate is fast (>100b.p.m.).



Bradycardia

- **Symptoms** Often asymptomatic. Fatigue, nausea, dizziness. The presence of syncope, chest pain, or breathlessness is concerning and suggests the presence of adverse signs; sudden cardiac death can occur.
- **Rhythm** The immediate management tends to relate more to cause and adverse signs than to the underlying rhythm, which may be
 - sinus bradycardia
 - heart block
 - AF with a slow ventricular response
 - atrial flutter with a high-degree block
 - junctional bradycardia.



Bradycardia

- **Causes**

- *Physiological*: Heart rates as low as 40bpm at rest and 30bpm in sleep can be accepted in asymptomatic trained athletes.
- *Cardiac*:
 - Degenerative changes causing fibrosis of conduction pathways (risk in elderly patients; may have previous ECGs showing bundle branch block or 1st- or 2nd degree heart block).
 - Post-MI—particularly after an inferior MI (the right coronary artery supplies the sinoatrial node and atrioventricular node in most people).
 - Sick sinus syndrome .
 - Iatrogenic—ablation, surgery.
 - Aortic valve disease, eg infective
 - Myocarditis, cardiomyopathy, amyloid, sarcoid, SLE.

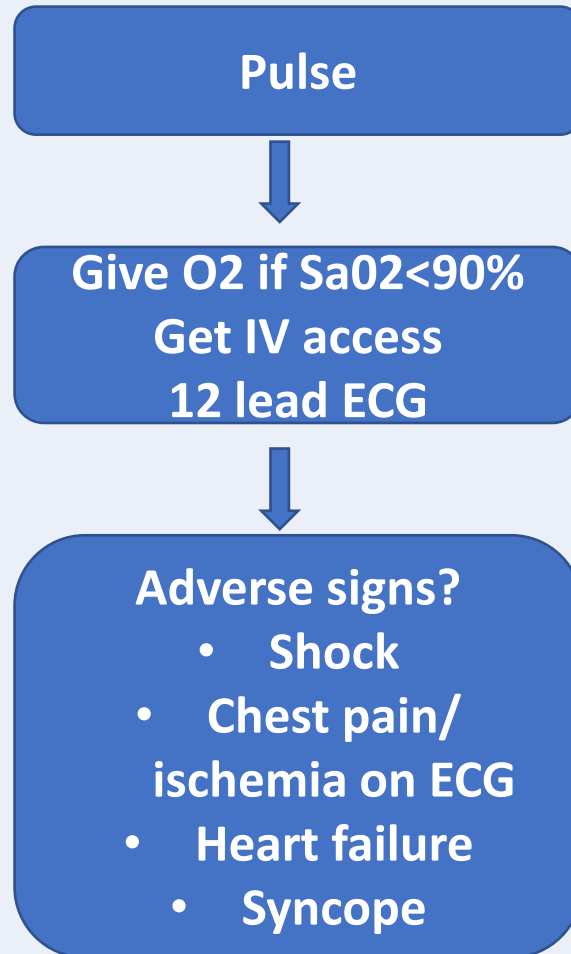


Bradycardia

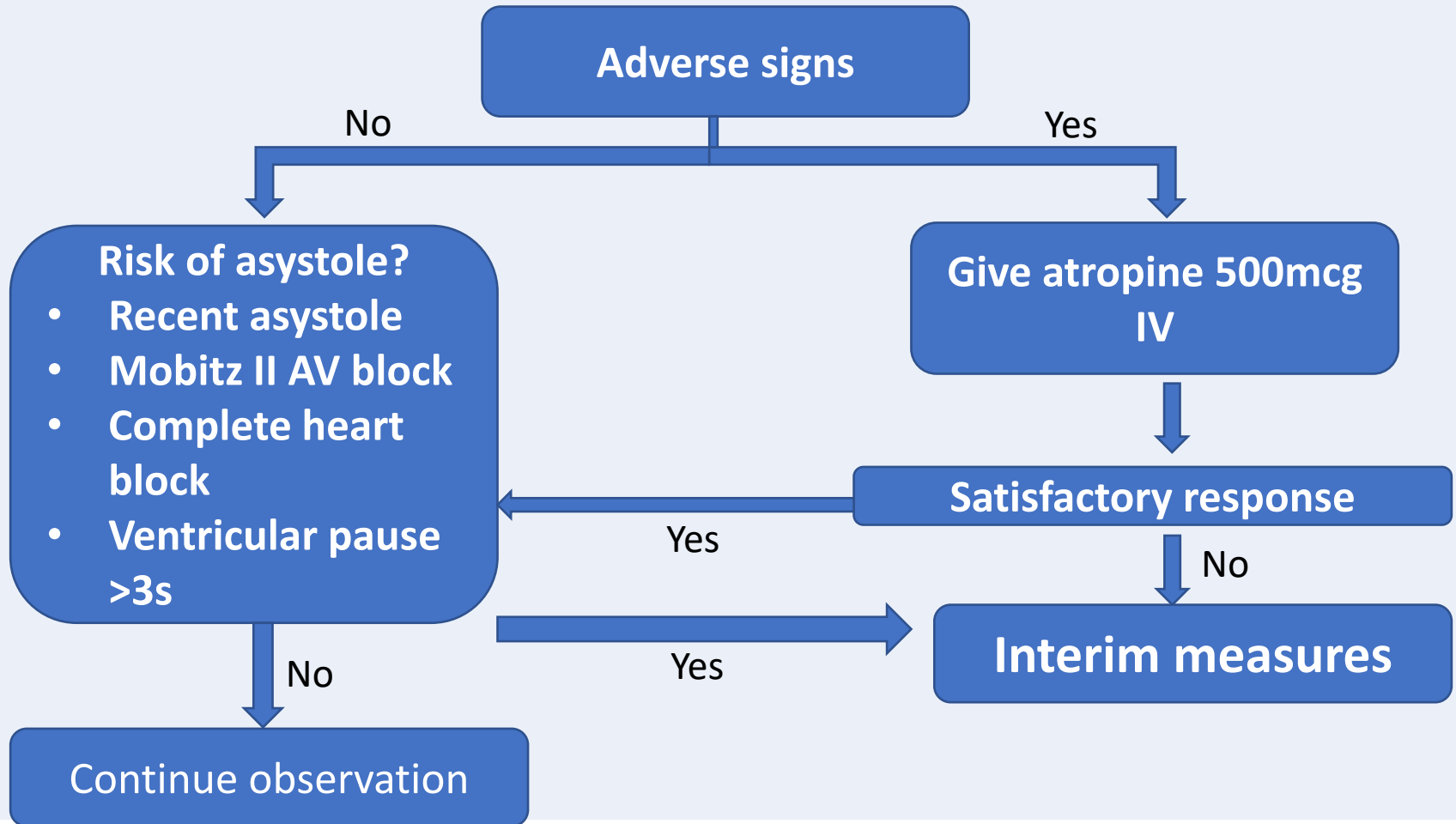
- **Causes**
- *Non-cardiac origin:*
 - Vasovagal—very common (p460).
 - Endocrine—hypothyroidism, adrenal insufficiency.
 - Metabolic—hyperkalaemia, hypoxia.
- Other—hypothermia, high ICP (Cushing's triad: bradycardia, hypertension, and irregular breathing: urgent senior input needed).
- *Drug-induced:*
 - beta-blockers, amiodarone, verapamil, diltiazem, digoxin



Management of bradycardia



Management of bradycardia



Interim measures:

- **Repeat atropine 500mcg IV every 3–5mins (max 3mg)**
- Transcutaneous pacing
- Isoprenaline 5mcg/min IVI
- Adrenaline 2–10mcg/min IVI
- Alternatives: aminophylline, dopamine, glucagon (if bradycardia caused by beta-blocker or calcium channel blocker)



Download More Medical Notes at

RISHACADEMY

educate yourself to empower yourself

www.rishacademy.com