SVT versus PSVT

Dr Kim Rajappan
Consultant Cardiologist & Electrophysiologist
John Radcliffe Hospital, Oxford

Disclosures: speakers fees for Abbott, BSC, Biosense, Medtronic
What is SVT?

- Supraventricular tachycardia
- SVT is common
- Both inpatient and outpatient presentations
‘Paroxysmal’ = intermittent
SVT/Narrow Complex Tachycardia

- By definition has to be something arising from above the AV node with ventricular activation through His-Purkinje system
- Sinus tachycardia
- Atrial fibrillation
- Atrial flutter
- AV re-entrant tachycardia (AVRT)
- AV nodal re-entrant tachycardia (AVNRT)
- Atrial tachycardia
Sinus rhythm/tachycardia
AVNRT
AVNRT

- Most common regular SVT
- 75% ♀

Treatment

- Vagal manoeuvres
- Medication – acutely adenosine, later beta blockers, calcium channel blockers, flecainide or amiodarone
- DC Cardioversion rarely necessary
- Electrophysiology study & ablation
AVRT (Accessory pathways/WPW)
Atrial tachycardia
Atrial tachycardia

- The least common form of SVT
- Affects children, young women and the elderly
- Can present with very rapid heart rates but syncope and hypotension are unusual
- Can be incessant and lead to a tachycardia-induced cardiomyopathy - rare
Atrial tachycardia

• Beta blockers will control the rate but won’t terminate AT

• AT is best suppressed with class I anti-arrhythmics such as flecainide (N.B. Patients with impaired LV function)

• Verapamil can be effective

• Amiodarone works but
  • Not a good long-term drug
  • Makes ablation very difficult

• Ablation has a 75% cure rate and is recommended for patients who
  • Can’t take drugs to suppress
  • Find the drugs are ineffective
Atrial flutter
Case History

- 28 year old ♂
- Referred by GP to outpatient clinic
- Palpitations off and on for many years
- Only recently becoming more frequent and prolonged
- Otherwise fit and well
What will happen at the appointment?
What will we ask?

• The ‘history’ of your symptoms

(i) when did the symptoms start?

(ii) how often do you get the symptoms, and are they continuous or occasional?

(iii) what, if anything, triggers the symptoms? Does anything relieve or aggravate them?

(iv) how do the symptoms affect your lifestyle?

Much of the rest will be in the referral sent to me
What will we ask?

- What does the patient mean by palpitations
- Nature (irregular/fast/slow/missed beat)
- Onset + offset
  - Both sudden ⇒ makes AVNRT/AVRT more likely
  - Either slow ⇒ think atrial tachy/AF/sinus tachy
- Duration
  - V. Brief ⇒ ? ectopy
  - More sustained ⇒ any of above
- Precipitants and relievers
  - Valsalva type ⇒ AVNRT/AVRT more likely
- Associated symptoms
What will we do?

• Examination: often normal (may do an echocardiogram)
• If triggered by exercise/posture then can try to reproduce
• 12-lead ECG
• Blood tests
• Monitoring
How can you help?

- Be as precise as you can
- Medication list – don’t forget doses please! Bring boxes as well as packets
- Eyewitness can be helpful for certain problems
- Bring any correspondence you have from other doctors treating you for the condition (plus investigations like ECGs if you have them)
- If you have symptoms and have an ECG done at another hospital during these please ask for a copy and bring it with you
Management of SVT – common themes

- Emergency/acute management

Options
- Reassure
- Pill in the pocket
- Regular medication
- Electrophysiology study & catheter ablation
Catheter ablation of SVT (not AF)

- Daycase procedure
- Sedation
- High ‘cure’ rates (90-95%)
- Serious risk < 1:2000
- Risk of PPM 1:1-200
- No driving 1 week
- Redo rate 5-10%

www.hearrhythmcharity.org.uk
In summary.....

- Title – simple answer
- More important to recognise different types of SVT
- Similarities and differences between them
- Can be very debilitating, but vast majority not life threatening
- Be prepared for any appointments
- Valuable information from resources such as those on the Arrhythmia Alliance website/leaflets
Thank You