Supraventricular tachycardia

The terminology of tachycardias can appear deliberately obscure and confusing. Actually it’s just very difficult to know how best to classify these rhythms! Supraventricular tachycardia (SVT) is a good example; in a sense, all the rhythms so far are SVTs, but this term is usually taken to mean a tachycardia using a circuit involving the AV node. This can be either with an accessory pathway (bundle of Kent) in Wolff-Parkinson-White syndrome, or the tissue in and around the AV node, as in atrioventricular (AV) node re-entry tachycardia.

These arrhythmias are sometimes called junctional tachycardias (Esberger et al, 2002). The ECG characteristically shows regular narrow QRS complexes at 130–250 per minute, depending on the circuit.

Immediate management

- Usually the patient is uncomfortable but haemodynamically stable (most have structurally normal hearts which can tolerate this heart rate)
- The priority is to terminate the tachycardia
- As all these arrhythmias require the AV node, they are terminated by anything that blocks the AV node, even for a very short time. Methods include:
  - Valsalva - this works best with the patient lying down, straining as hard as possible for as long as possible before slowly letting out their breath)
  - Carotid sinus massage - check for a bruit first
  - IV adenosine (big cannula ≥green) in antecubital vein, ≥6 mg adenosine (fast), ≥10 mL saline flush (fast). If the patient doesn’t feel it, you haven’t done it right!).

These will terminate the tachycardia but if it recurs quickly, you may have to give longer-acting AV node blockers, eg verapamil, and specialist advice is recommended.

Long-term management

- This form of tachycardia is usually recurrent
- There is no particularly effective, safe drug treatment
- Patients should be referred to an electrophysiologist to discuss radiofrequency ablation, which usually produces a long-term cure at very low risk