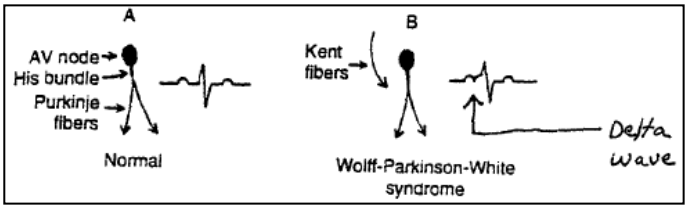
Wolff-Parkinson-White (WPW) Syndrome

Anesthetic Pearls: Anesthetic Implications and Management of WPW

• Accessory pathway bypasses A-V node:
(pre-excitation of the "Kent fibers")



• Short P-R, wide QRS, delta wave

• Incidence of ~3% of general population

• Increased risk of sudden cardiac arrest / death (incidence of 0.6% over general population)

• PSVT: #1 dysrrhythmia (antegrade normal conduction route down SA -> AV nodal fibers with retrograde pathway through accessory Kent fibers; propagating a circular conduction loop)

• Important Points:
1. avoid factors/drugs that increase sympathetic nervous system activity
(atropine, ketamine, pancuronium)
2. avoid hypovolemia

• Boards point: Verapamil and Digoxin may decrease relative refractory period of accessory pathway responsible for A-fib resulting in an increased rather than decreased ventricular response (ultimately may increases V-fib potential).

• Definitive treatment is radiofrequency catheter ablation

Management of Cardiac Dysrrhythmias in the Patient with WPW

A. **Paroxysmal Supraventicular Tachycardia (PSVT)**
Vagal maneuvers
Valsalva
Gag reflex (finger in the throat)
Immersion of face in cold water (diving reflex)
Adenosine 3-12 mg IV
Verapamil 2.5-10 mg IV
Esmolol 50-100 mg IV
Procainamide 500 mg IV
Artificial cardiac (overdrive) pacing (transvenous)
Electrical cardioversion

B. **Atrial Fibrillation**
Electrical cardioversion (hemodynamically unstable)
Procainamide (hemodynamically stable)