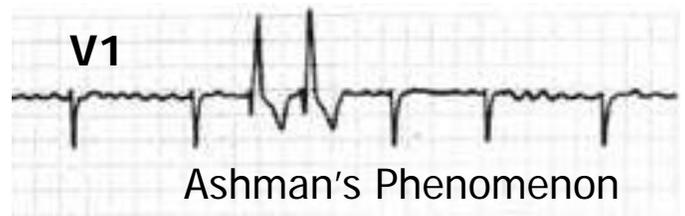


20. Atrial Fibrillation



Priorities of Initial Treatment:

- If hemodynamically unstable, synchronized DCCV immediately.
- First priority is rate control. Several agents:
- **β blockers**: IV Esmolol, Metoprolol. Oral Metoprolol, Atenolol. (Class 1-Very effective)
 - BBs especially good for rate control w/ exercise.
 - *Example Load-Metoprolol 5 mg IV q 5 minutes, until rate control and also oral dose*
- **CCBs**: IV Diltiazem. Oral Diltiazem, Verapamil. (Class 2a indication-Less effective)
 - *Example Load-0.25 mg/kg (20 mg is average) IV bolus 2 minutes.*
 - *If necessary, a second bolus 0.35 mg/kg (25 mg average)*
 - *Continuous IV infusion: 10 mg/hr (usually 5 to 15 mg/hr)*
- **Digoxin**: IV or oral. Slow and poorly effective, slows rate at rest but not with activity.
 - *Example Load-Digoxin 0.25 mg IV q 4h x 4 doses*
- If < 48 hrs, can cardiovert w/o anticoagulation may require 1 mo AC afterwards due to atrial stunning.
- If > 48 hrs, requires 3-4 wks anticoagulation before cardioversion (DCCV or w/ drugs)
- Can TEE to clear atrial appendages (LAA/RAA) for thrombi or spontaneous echo contrast (SEC or 'smoke') - - if none, DCCV w/o anticoagulation (AC) but may still require one month AC.
- Short paroxysmal episodes that spontaneously convert, anti-coagulation indications unclear.
- Anti-arrhythmic based on underlying heart pathology

Etiologies: Mnemonic: "PIRATES"

- P Pulmonary Disease
- I Ischemia
- R Rheumatic Heart Disease
- A Atrial Myxoma
- T Thyroid / Theophylline
- E Ethanol
- S Sepsis / Stimulants / Surgery

Work up: 1. TSH

2. Recent echocardiogram
3. Consider exercise test

Treatment Priority Goals:

1. Slow Ventricular Response Rate
2. Reduce risk of embolic disease - anticoagulation
3. Convert back to normal sinus rhythm
4. Maintain in normal sinus rhythm

Ashman's Phenomenon is not PVC's but usually an intermittent RBBB caused by a long, then short ventricular response. Conduction is aberrant when the stimulus falls during the refractory period which is longer for the right bundle than of the left bundle.

Why Biphasic: (About half the Joules)

- Ventricular Fib Conversion: Monophasic 93%, Biphasic 99%
- Atrial Fib Conversion: Monophasic 70%, Biphasic 95%+

Chemical Cardioversion:

1. Ibutilide (CORVERT®) (Class III) Intravenous (~70% Effective)
 - 1mg for over 10 minutes **syringe pump**; repeat x 1, (Weight based < 60 Kg)
2. Dofetilide (TIKOSYN®) (Class III) 500 mg po bid (make sure QTc < 500)
3. Flecainide (Class 1c) only without ischemic disease. ((Out patient 300 mg po PRN, 70% Effective)
4. Propafenone (Class 1c) 600 mg po PRN (70% effective)
5. Amiodarone (Class III+) 600 mg po qd, 300 mg IV (~40% Conversion)
6. Sotalol or Quinidine are less effective

Chemical Adjuvant for WPW with Atrial Fib:

1. Procainamide (Class 1a) 15 mg/kg IV over 30 min or 100 mg IV over 10 min or QRS Widens > 50%
2. Ibutilide

