5. AMIODARONE

a) Pharmacology

Prolongs duration and refractory period of action potential. Slows electrical conduction, electrical impulse generation from sinoatrial node, and conduction through accessory pathways. Also dilates blood vessels.

b) Pharmacokinetics

Amiodarone primarily alters/blocks the potassium and sodium ion permeability across the myocardial membrane, which in effect, stabilizes the ion channels and changes impulse conduction through the myocardium. Amiodarone also has some effects on beta receptors, and calcium channels

c) Indications

(1) Prevent recurrence of ventricular fibrillation/tachycardia after defibrillation and conversion to supraventricular rhythm
(2) Ventricular tachycardia (VT)
(3) Ventricular fibrillation (VF)

d) Contraindications

(1) Second or third degree AV blocks
(2) Sensitivity to amiodarone
(3) Idioventricular escape rhythms
(4) Accelerated idioventricular rhythm
(5) Sinus bradycardia or arrest or block
(6) Hypotension
(7) Cardiogenic shock
(8) Ventricular conduction defects
(9) Iodine hypersensitivity

e) Adverse Effects

(1) Bradycardia
(2) Hypotension
(3) Prolonged QT interval

f) Precautions

May prolong the QT interval increasing risk of torsades de pointes, and VF. Amiodarone inhibits atrioventricular conduction and decreases myocardial contractility, increasing the risk of AV block or of hypotension with any calcium channel blocker.

g) Dosing

(1) Adult with pulse: 150 mg IV/IO over 10 minutes (mixed in 50 - 100 mL of approved diluent). May repeat once.

(2) Adult without pulse VF/VT/(torsades after magnesium sulfate): 300 mg IV/IO. May repeat one time
150 mg IV/IO

(3)  Pediatric with pulse: 5 mg/kg IV/IO over 20 minutes (mixed in 50 - 100 mL of approved diluent)

(4) Pediatric without pulse: 5 mg/kg IV/IO; max single dose 300 mg. May repeat twice to a maximum of 15 mg/kg.