Atrial Fibrillation – Rate Control Drugs

Metoprolol IV Dosing
5 mg over 2 mins, every 5 mins for up to total 15 mg

Metoprolol IV Conversion to PO dosing
- Can start 1st oral dose within 20 mins of initial IV to estimate dosing needs.
  - Total 5 mg IV → start 12.5 mg PO Q6H
  - Total 10 mg IV → start 2.5 mg PO Q6H
  - Total 15 mg IV → start 3.75 mg PO Q6H

If at 50mg q6 and HR >110, consider adding diltiazem.

Up-titrage PO dose if HR>110 after 2 hours from 1st oral dose
- 12.5 mg PO Q6H → 25 mg PO Q6H
- on 25 mg PO Q6H → 37.5 mg PO Q6H
- on 37.5 mg PO Q6H → 50 mg PO Q6H

Metoprolol – Key Points to Remember for Management in Outpatient Setting
- Metoprolol is 1st line for AV nodal blocking therapy unless prior intolerance or severe asthma
- Initial dosing: Metoprolol tartrate 25 mg PO twice daily (or succinate 50 mg daily)
- If already taking metoprolol, add suggested initial dosing amount to patient’s total daily dose, up to a maximum of 200 mg/day; if patient already taking 200 mg/day metoprolol, add diltiazem
- Titrate according to goal heart rate average < 80 bpm in AFIB and sinus rhythm > 50

Calcium Channel Blockers
**DO NOT USE diltiazem or verapamil if EF <40%**

Diltiazem IV Dosing
0.25mg/kg (Max dose: 25mg) IV bolus x1. Start drip at 5mg/hr. Consider addition 30mg PO IR Diltiazem q6 hours or home dose to reduce need for drip. Drip can be titrated to 15mg/hr, with re-bolus of 0.25mg/kg with each increase.

IV to PO diltiazem: Oral dose = (IV drip rate [in mg/hr] x 3 + 3) x10

Steps to covert from diltiazem IV to PO
1. Calculate total daily oral dose
2. Round dose to a 30 mg increment, divide this daily dose by 4 to give Q6H dosing
3. Give first PO dose 1 hour prior to titrating drip
4. One hour after PO dose, titrate drip down by 2.5 mg/hr until drip is running at 0 mg/hour

Std rates for diltiazem generally convert as follows:
- 3 mg/hour = 120 mg/day
- 5 mg/hr = 180 mg/day
- 7.5 mg/hr = 260 mg/day
- 10 mg/hr = 330 mg/day
- 15 mg/hr = 480 mg/day

Verapamil IV Dosing
0.1mg/kg bolus (Max dose: 10mg) IV bolus x 1. Start drip at 5mg/hr and titrate to goal heart rate (Max 20mg/hr) with re-bolus of 0.1mg/kg with each increase.

Verapamil PO Dosing
240 - 320 mg daily. Divide over 3-4 doses if short acting (Q6H) Once daily if extended release (ER)

Amiodarone IV Dosing
150mg bolus then 1mg/minute x 6 hours and 0.5mg/minute x 18 hours

If rates >110 after 1 hour optional 2nd 150mg IV bolus and continue 1mg/minute gtt.

Amiodarone PO dosing in hospital
After converts to NSR or after 24 hrs, 400mg PO BID up to 10g load (includes IV), then 200mg daily. Upon discharge: 200 mg daily for 1-3 months. Decrease in-hospital dose by 50% if sinus <50 bpm; d/c if sinus <40 bpm or symptoms. Depending on clinical situation and duration of AF, outpatient amiodarone may not be warranted.

Full guideline: Atrial Fibrillation: Management – Adult – Inpatient/Ambulatory/Emergency Department