CCB TREATMENT

UNRELIABLE THERAPIES, BUT YOU HAVE TO TRY!

Pacing – capture, but no inc in EF
Charcoal – 1gram/kg
Atropine – small increase in rate, but no inc in EF
  Kids dosing:
    0.02mg/kg, min 0.1mg, may repeat x one
  Adult dosing:
    0.5mg, may repeat up to 1.5mg

Atropine – small increase in rate, but no inc in EF
  Kids dosing:
    0.02mg/kg, min 0.1mg, may repeat x one
  Adult dosing:
    0.5mg, may repeat up to 1.5mg

Glucagon -
  Kids dosing:
    • Bolus - 0.05mg/kg , may repeat once at 5 minutes
    • Infusion – 0.07mg/kg/hr

  Adult dosing:
    • Bolus – 3-5mg IV (after Zofran, I give 5mg)
    • Infusion – 5-15mg/hr (I give 15mg and back down )

I prefer the bigger doses, b/c it is probably not going to work. If glucagon has any chance it will be at the larger doses.
**Calcium:**

Kids dosing:
- CaCl (one amp = 3x the elemental calcium in CaGluconate)
  - 20mg/kg over 5min, repeat x 5 doses
- Ca Gluconate
  - 60mg/kg over 5min, repeat x 5 doses

Adult dosing:
- CaCl – give at least 2 amps before you give up
- Ca Gluconate – give at least 6 amps before you give up, 3 at a time

*Remember that a calcium level over 13 or Ca x Phos >70 will cause permanent precipitation of calcium into the intra/extravascular spaces.*

**Pressors:**

Phenylephrine – I prefer this for pure CCB ODs. No need to flog the heart the heart with unneeded beta affects.

Kids dosing:
- Bolus 5-20mcg/kg - I recommend to start 5-10mcg and then double every 2-5 minutes until affect achieved
- Infusion 0.1-0.5mcg/kg/min, max 5mcg/kg/min

Adult dosing:
- Bolus 40-500mcg. I start 50-100mcg and recheck in 2 minutes.
- Infusion 100-180mcg/min

Epinephrine – I prefer his for Beta Blocker ODs. The added beta affect may give you some pick-up in EF; a little extra squeeze.

Kids dosing:
- Bolus 5-20mcg – I recommend starting with 5-10mcg and double every 2-5 minutes until affect achieved
- Infusion 0.1-1mcg/kg/min IV

Adult dosing:
- Bolus = 20-250mcg – I start 50mcg and double and double every 2-5 minutes.
- Infusion = 2-10mcg/min
Preventing phenylephrine as a push-dose pressor

- Phenylephrine is supplied in a 1 ml vial at concentration of 10mg/ml
- Take 1ml vial & inject into a 100ml bag of NS
- You now have a bag of phenylephrine at a concentration of 100mcg/ml
- Draw up 3-5ml in a syringe
- Push 0.5-2ml (50-200 mcg) at a time, q2-5 minutes for gentle BP control
- Response within 1 minute, lasts ~5 minutes

Preventing epinephrine as a push-dose pressor

- Code box vial: 10 ml vial at concentration of 1 mg/10 ml (1:10,000)
- Take 10ml of NS (i.e. saline flush) & dump 1ml = 9ml NS syringe
- Draw up 1ml of epinephrine vial in the same syringe
- You now have an epinephrine syringe at 10mcg/ml
- Push 0.5-2ml (5-20 mcg) at a time, q5 minutes

Reproduced from EM RAP show notes
High Dose Insulin:

Kids and adult dosing:
- **Bolus** - 1U/kg – I recommend that you give a test dose of 10% of the dose, wait 3-5 minutes and then if the glucose remains the same or goes up then give the full dose. Have D50 at the ready.
- **Infusion** – 0.5–1U/kg/hr

**Monitor the glucose every 15min!!**
- Have a dextrose drip ready to go, you will need D10-D50.
- Toxicologists believe that when the glucose goes down the toxidrome is resolving and when the glucose goes up the toxidrome is worsening.
- Start the dextrose infusion when the glucose <250

**Beware the K**
- Check the K every 30 minutes. Again you will probably not see it move for a while.
  - Most of what you see is just shifts of K, not depletion.
- Start K replacement at 2.5

**Intralipids:**

Kid and Adult Dosing:
- 1.5ml/kg/min bolus over one minute followed by,
- 0.5ml/kg/min up to 8ml/kg
- Total infusion time is 13 minutes
CCB TREATMENT

Call for ECMO and a Balloon Pump as you start the Intralipids if not sooner!

BB TREATMENT SIMILARITIES

- **Calcium and Glucagon should work better** on BBs than CCBs because the final common receptor (calcium channel) has not been poisoned.

- Whole Bowel Irrigation is indicated in Beta Blocker toxicity, but not in CCBs. Put the NG tube in and put the GoLytely on an infusion pump rather than have the patient drink to clear bowel effluent, but make sure you have confidence in your airway.

- Be cautious with high dose insulin. Kids commonly get hypoglycemic seizures with BB toxicity. Stay on top of your glucose. Check q 15min!

- **Beta-blockers cause hypoglycemia** and this is the MAIN WAY to rapidly distinguish the two OD’s.

- Dialysis works in BB ODs.