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Medical Director

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BETA BLOCKER AND CALCIUM CHANNEL BLOCKER OVERDOSE

- I. AUTHORITY: Health and Safety Code, Division 2.5, California Code of Regulations, Title 22, Division 9
- II. PURPOSE: To serve as the treatment standard for EMT-Is and EMT-Ps in treating patients.
- III. PROTOCOL:

BETA BLOCKERS: May cause early and often abrupt onset of cardiovascular collapse (bradycardia and hypotension), Bronchospasm, respiratory arrest, seizures and hypoglycemia. Beta Blocker drugs include:

BRAND	GENERIC	BRAND	GENERIC	BRAND	GENERIC
Coreg	Carvedilol	Toprol	Metoprolol	Kerlone	Betaxolol
Trandate	Labelotol	Ziac	Bisoprolol	Lopressor	Metoprolol
Betapace	Solatol	Normodyne	Labalalol	Tenormin	Bisoprolol
Cartrol	Carteolol	Inderal	Propranolol	Zebeta	Bisoprolol
Levator	Penbutolol	Blocadren	Timolol		

CALCIUM CHANNEL BLOCKERS: Signs and symptoms due mostly to poor myocardial contractility and vasodilation include: weakness, dizziness, syncope, coma, profound bradycardia, high degree EV block, and shock. Nausea and vomiting are also common. Angina, confusion, and CNS depression may also occur. Nifedipine can cause reflex tachycardia. Calcium channel blocker drugs include:

BRAND	GENERIC	BRAND	GENERIC	BRAND	GENERIC
Adalat	Nifedipine	Procardia	Nifedipine	Dilacor	Diltiazem
Cardene	Nicardipine	Tiazec	Diltiazem	Ispotin	Verapamil
Covera	Verapamil	Verelan	Varapamil	Norvasc	Amlodipine
Dynacirc	Isradipine	Calan	Verapamil	Posicor	Mibefradil
Nimotop	Nimodipine	Cardizem	Diltiazem	Sular	Nisoldipine
Plendil	Felodipine			Vascor	Bepredil

STANDING ORDERS

ABCs

SECURE AIRWAY As appropriate. Confirm tube placement, if intubated, with end-tidal CO₂ detector and esophageal detector device. **Continuous waveform capnography should be used in all intubated patients, if available.**

OXYGEN

MONITOR Treat rhythm as appropriate.

IV ACCESS Rate as indicated. If systolic BP less than 90 mmHg give 250 ml fluid boluses until systolic BP 90-100 mmHg. Reassess the patient after each bolus.

ASSESS For serious signs and symptoms related to bradycardia or myocardial depression: systolic BP less than 90 mmHg, severe chest pain, shortness of breath, altered level of consciousness or congestive heart failure.

DRAW BLOOD Perform blood glucose check

DEXTROSE 25 gm IV push - if blood glucose less than 75 mg/dl. May repeat once. Recheck blood glucose in five minutes

ATROPINE 0.5 mg IV if systolic BP is less than 90 mmHg AND HR is less than 50 AND serious signs and symptoms. Repeat every 3 minutes as needed.

STANDING ORDERS CONTINUED NEXT PAGE

STANDING ORDERS CONTINUED

CALCIUM CHLORIDE	If a calcium channel blocker overdose is suspected, 100 mg (1.0 ml) slow IV push for systolic BP less than 90 mmHg AND HR less than 50 AND serious signs and symptoms. Repeat every 5 minutes as needed.
GLUCAGON	1 mg diluted with 4 ml normal saline IV if serious signs and symptoms are present. Repeat every minute as needed.
MIDAZOLAM	If seizing 2.0 mg IV push. Titrate in 1 mg increments for seizure control (maximum dose 6 mg). If unable to establish IV after 1 attempt, give 5 mg IM. May repeat once in 10 minutes if seizures continue.
ALBUTEROL	For bronchospasm: 3.0 ml of 0.5% solution (or 6 unit-dose vials) via nebulizer over one hour, or until symptoms improve. If patient intubated, administer dose through aerosol holding chamber. Repeat as needed.
ACTIVATED CHARCOAL	50 gm PO if the patient is alert, protecting his/her airway, and has not ingested a CNS depressant.