

Beta-Blocker Toxicity

Beta-blockers have been in use for hypertension, migraine headaches, hyperthyroidism, glaucoma, anxiety, and various other disorders. As a result of their expanded use, the incidence of overdose with these agents has also increased.

Clinical manifestations :

- bradycardia
- hypotension
- arrhythmias
- hypothermia,
- hypoglycemia
- seizures

two beta-blockers require special consideration:

- propranolol -> causes sodium channel blockade -> QRS widening -> treat with NaHCO₃
- sotalol -> causes potassium efflux blockade -> long QT -> monitor for Torsades

Management:

Resuscitation

- fluid
- beta-agonists
- vasopressors
- atropine
- pacing

Acid-base and Electrolytes Balance:

hypoglycaemia -> dextrose
hyperkalaemia: Ca²⁺ gluconate, dextrose-insulin, NaHCO₃, dialysis
salbutamol

Decontamination

activated charcoal if <1 hour and no CI

Antidotes → Atropine, Glucagon

- glucagon 50mcg/kg up to 10mg -> 2-10mg/hr
- high dose insulin euglycaemic therapy
- consider intralipid if refractory to standard measure

Toxbase: should be used for guidelines of how to manage any overdose ingestion.