ศูนย์พิษวิทยารามาธิบดี
คณะแพทยศาสตร์โรงพยาบาลรามาธิบดี มหาวิทยาลัยมหิดล
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Hyperinsulinemia euglycemia (HIE) Therapy

Indications: Severe Calcium channel blocker & Beta blocker poisoning

Initial management:

- Secure airway if indicated and adequate ventilator support
- Consider central venous catheterization for volume status assessment and infusion of high concentration medicine
- Renal function, acid-base and fluid-electrolyte should be assessed and corrected

Dosage and Administration:

Initial dose:

Insulin: regular insulin 1 u/kg IV bolus

Dextrose: if blood glucose < 300 mg/dL, administer 50% dextrose 50 mL IV

Followed by infusion:

Insulin: start with regular insulin 0.5-1 u/kg/hr, increase 1-2 u/kg/hr every 10-15 minutes until shock (tissue perfusion) improves (maximal rate 10 u/kg/hr)

Dextrose: start with 0.5 g/kg/hr, select concentration of dextrose as the following details below

Route	Dextrose concentration	Infusion rate (mL/kg/hr)
Peripheral line	10%	5
Central line	20%	2.5
	25%	2
	50%	1

(keep blood glucose 100-250 mg/dL)

Monitoring:

- Blood glucose:
  - every 10-15 minutes until stable, then every 1-2 hours after steady stage
  - maintain blood glucose 100-250 mg/dL
  - if hypoglycemia, give 50% glucose 50 mL IV and then increase the dextrose infusion by 25-50 g/hr
- Serum potassium:
  - every hour during titration, then every 4-6 hours
  - maintain serum potassium 2.8-3.2 mEq/L

Adverse effects: Hypoglycemia and hypokalemia