

GLUCAGON

ACTION:

1. Antihypoglycemic; converts stored liver glycogen to glucose, resulting in increased blood sugar

INDICATIONS:

1. Hypoglycemia (BS < 80 mg/dL) in diabetic patients, if symptomatic and IV cannot be established.
2. Beta blocker overdose or toxicity; including: acebutolol (Sectral), alprenolol, atenolol (Tenormin), betaxolol (Betoptic, Kerlone), bevantolol, bisoprolol, carteolol (Cartrol), fleistolol, labetalol (Normadyne, Trandate), levobumolol (Betagan), metoprolol (Lopressor), nadolol, oxprenolol, penbutolol, pindolol, propranolol, sofalol, timolol.
3. Calcium channel blocker overdose or toxicity; including: verapamil, diltiazem (Cardizem), nifedipine, nicardipine, nimodipine, amlodipine, felodipine, flunarizine, bepridil, nitrendapine, isradipine, nisoldapine.

CONTRAINDICATIONS:

1. Allergy or known hypersensitivity to glucagon

PRECAUTIONS:

1. Drug may cause occasional nausea and vomiting.

ADULT ADMINISTRATION:

1. For hypoglycemia:
 - A. If unable to start IV, an initial dose of glucagon may be given prior to medical control contact.
 - B. Glucagon comes as one unit dose (1 mg) of powdered glucagon with a vial containing 1 ml of diluting solution. Inject diluting solution into powdered glucagon vial. Shake gently until solution is clear.
 - C. Inject IM into thigh or upper arm.
 - D. Turn patient to one side in case vomiting occurs.
 - E. If LOC improves and patient is able to swallow, give a fast-acting carbohydrate immediately.
 - F. Repeat blood glucose measurement.
 - G. Further orders must come from monitoring physician.
2. Obtain physician order before administering for overdose or toxicity.

PEDIATRIC ADMINISTRATION: (same as adult except):

1. If patient is < 2 and hypoglycemic (< 50), consult with medical control.
2. If patient is < 12 but ≥ 2 with BS < 60 and EMT is unable to start an IV, administer $\frac{1}{2}$ the adult dose.
3. Further orders must come from medical control.

SPECIAL NOTES:

1. **May be administered by Basic, Basic-IV, or ALS personnel.**
2. **Only Paramedic/RN personnel may administer for overdose or toxicity.**
3. For severe hypoglycemia (BS < 40 mg/dL), 50% dextrose IV is treatment of choice.
4. For conscious patients, simple, oral carbohydrates are most effective.
5. If family has already given patient glucagon, EMT's may administer one dose prior to Medical Control contact if patient is still unconscious after the initial dose.
6. If patient is comatose from DKA or hyperglycemia, glucagon will not worsen it to any significant degree.
7. Consultation with monitoring physician is mandatory if considering non-transport after glucagon administration. All patients whose hypoglycemia is due to oral hypoglycemic agents (such as Orinase or Tolinase) should be transported.

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