2.9P Hypoglycemia – Pediatric

Hypoglycemic emergency is defined as glucose <60 mg/dl with associated altered mental status, GCS <15.

EMT STANDING ORDERS

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- Routine Patient Care.
- Obtain glucose reading.
- Oral glucose: administer commercially prepared glucose gel or equivalent.
  - Hypoglycemic patients must be alert enough to swallow and protect airway.
- For patients with an insulin pump who are hypoglycemic with associated altered mental status (GCS<15):
  - Stop the pump or disconnect catheter at insertion site if patient cannot ingest oral glucose or ALS is not available.
  - Leave the pump connected and running if able to ingest oral glucose or receive ALS interventions.

ADVANCED EMT/PARAMEDIC STANDING ORDERS

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- Administer 5 mL/kg dextrose 10% IV via premixed infusion bag (preferred) or prefilled syringe per Pediatric Color Coded Appendix 3, may repeat every 5 minutes until mental status returns to baseline and glucose level is greater than 60 mg/dL. IV pump not required.

If unable to obtain IV access:

- Patients < 20 kg, give glucagon 0.5 mg IM.
- Patients > 20 kg, give glucagon 1 mg IM.

Intraosseous (IO) administration of dextrose should be reserved for hypoglycemic patients with severe altered mental status or active seizures and IV access cannot be obtained.

PEARLS:

- Hypoglycemic emergency in pediatrics is defined as glucose <60 mg/dl with associated altered mental status, GCS <15.
- There are no statistically significant differences in the median recovery time to a GCS score of 15 following administration of D10% versus D50%. D10% may benefit patients by decreasing the likelihood of post-treatment hyperglycemia and reducing the likelihood of extravasation injury.
- Causes of hypoglycemia include medication misuse or overdose, missed meal, infection, cardiovascular insults (e.g., myocardial infarction, arrhythmia), or changes in activity (e.g., exercise).
- Sulfonylureas (e.g., glyburide, glipizide) have long half-lives ranging from 12-60 hours. Patients with corrected hypoglycemia who are taking these agents are at particular risk for recurrent symptoms and frequently require hospital admission.
- Oral glucose equivalents include 3-4 glucose tablets, 4 oz. fruit juice (e.g. orange juice), non-diet soda, 1 tablespoon of pure NH maple syrup, sugar, or honey.
- Encourage patients who refuse transport after improvement in GCS and are back to baseline to consume complex carbohydrates (15 grams) and protein (12 – 15 grams) such as peanut butter toast, mixed nuts, milk or cheese to stabilize blood sugar.
- Hypoglycemia may be detrimental to patients at risk for cerebral ischemia, such as victims of stroke, cardiac arrest, and head trauma.