Diabetic Emergencies

REFRESHER

RECOGNIZE IT

- Complications: DKA, hyperosmolar hyperglycemic state (HHS), hyperglycemia without acidosis, hypoglycemia
- Frequent and often life-threatening emergencies in diabetics
- Hypoglycemia, neuroglycopenic: confusion, agitation, focal deficits mimicking stroke, seizures, coma
- Hypoglycemia, autonomic: palpitations, tachycardia, anxiety, sweating
- DKA: fruity odor, Kussmaul respirations, abdominal discomfort, nausea/vomiting; dehydration 4-6 L average
- HHS: glucose generally >600 mg/dL, severe dehydration, hypotension, tachycardia, focal deficits, coma, seizures
- Hyperglycemia causes: infection, infarction, pregnancy, dietary indiscretion/non-compliance, insulin lack or pump failure

ASSESS

- ABCs first (per the original's treatment block)
- Hypoglycemia causes (RE-EXPLAINED): renal failure, sulfonylureas, exogenous insulin or oral hypoglycemics
- More causes: pituitary/adrenal dysfunction, liver disease, infection, neoplasm, drugs, alcohol
- Severe hypoglycemia is <50 mg/dL; one sulfonylurea pill can cause severe hypoglycemia in children
- Oral hypoglycemics carry a high risk of hypoglycemia recurrence
- Diabetics: get a 12 lead and a stroke assessment — MI and stroke are more likely causes, and MI presents atypically
- Keep a high degree of suspicion for sepsis; perform a thorough history and physical

ACT — FIRST MOVES

1. Hypoglycemia: oral glucose if the patient can safely swallow; otherwise D10W
2. Hyperglycemia: fluids — may not be needed, but give to avoid dehydration
3. DKA: fluids — normal saline 20 mL/kg at a rate of 1000 mL/hr (as written on the page)
4. HHS: aggressive fluid management

PEARLS

- Type 1: absolute lack of insulin, usually begins in childhood; Type 2: insulin resistance, typically oral medications
- Insulin drives glucose and potassium into cells and blocks fat and protein breakdown
- HHS lacks Kussmaul breathing, fruity odor, and neurologic deficits of DKA (per page's comparison)
- Do not dismiss abdominal pain in DKA — surgical and ischemic abdominal pain can lead to DKA, and it can signal acute MI

Take Home Message:

Check the sugar and name it — hypo, DKA, or HHS: glucose for lows, fluids for highs, 12 lead and stroke check either way.