

Sugar & Salt Problems

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Case 1

You are seeing a 5 year old in your office for a sick visit. Parents report that his symptoms started 3-4 days ago with some abdominal pain and low-grade fevers. He was still drinking lots of fluids, so they didn't think much of it. Over the past 2 days, his abdominal pain is getting worse, and today he has started vomiting. He asks for water, but can't keep anything down. He seems very tired and lethargic today.

Case 2

A 2 month old, full term, male is brought to your emergency department for 1 day of fever, vomiting and diarrhea. Parents report that he is increasingly sleepy and less responsive today.

On your evaluation, he is ill-appearing and hypotensive. A POC glucose is 22. You and your team start the resuscitation process as you try to figure out what is wrong with this patient.

Case 3

A 13 year old girl is brought in by EMS for altered mental status. Parents report that she has been having chills, hot flashes and sweating for the past few days. Last night, she seemed very agitated and was trembling. Parents report she has been losing weight for the past several months, although she has also been training for a marathon, so they didn't think much of it. This morning, she was confused and hadn't been able to sleep all night.

EMS reports a pulse of 174 bpm and a BP of 179/85. Temperature is 40.4 C.

Diabetic Ketoacidosis



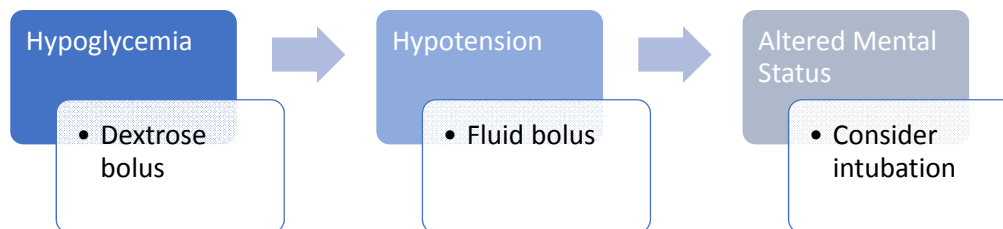
Diabetic Ketoacidosis

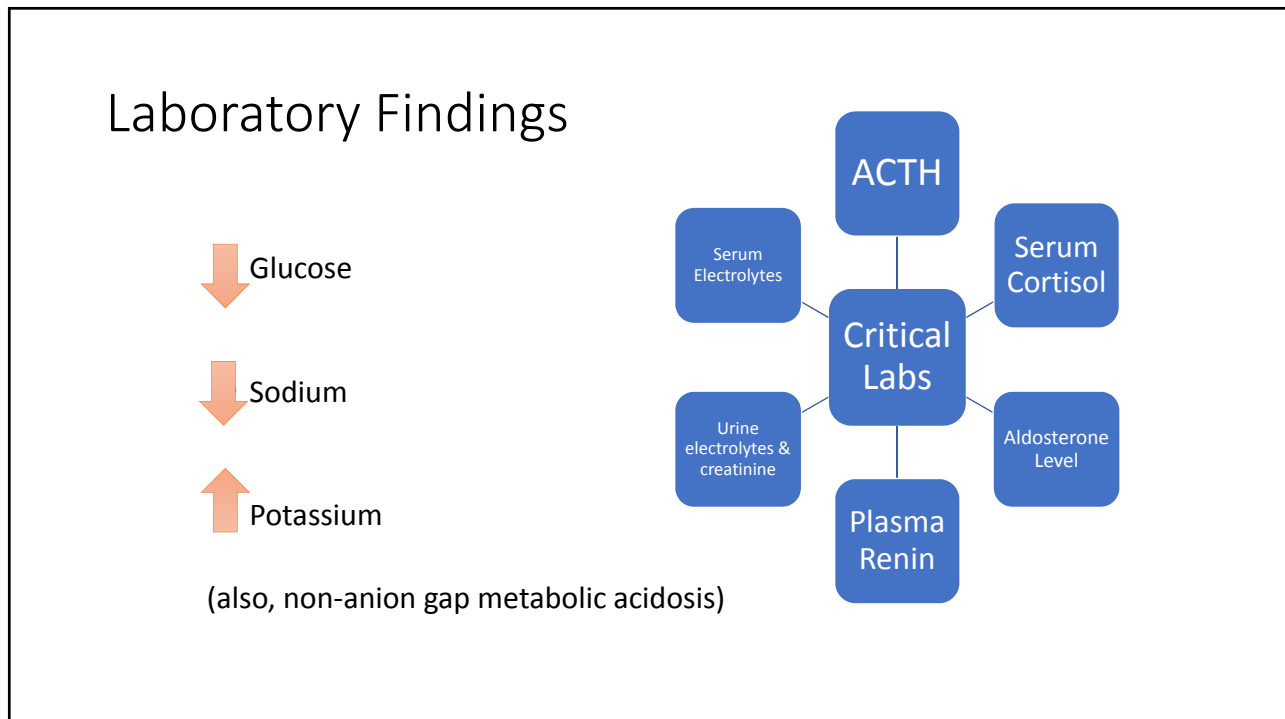
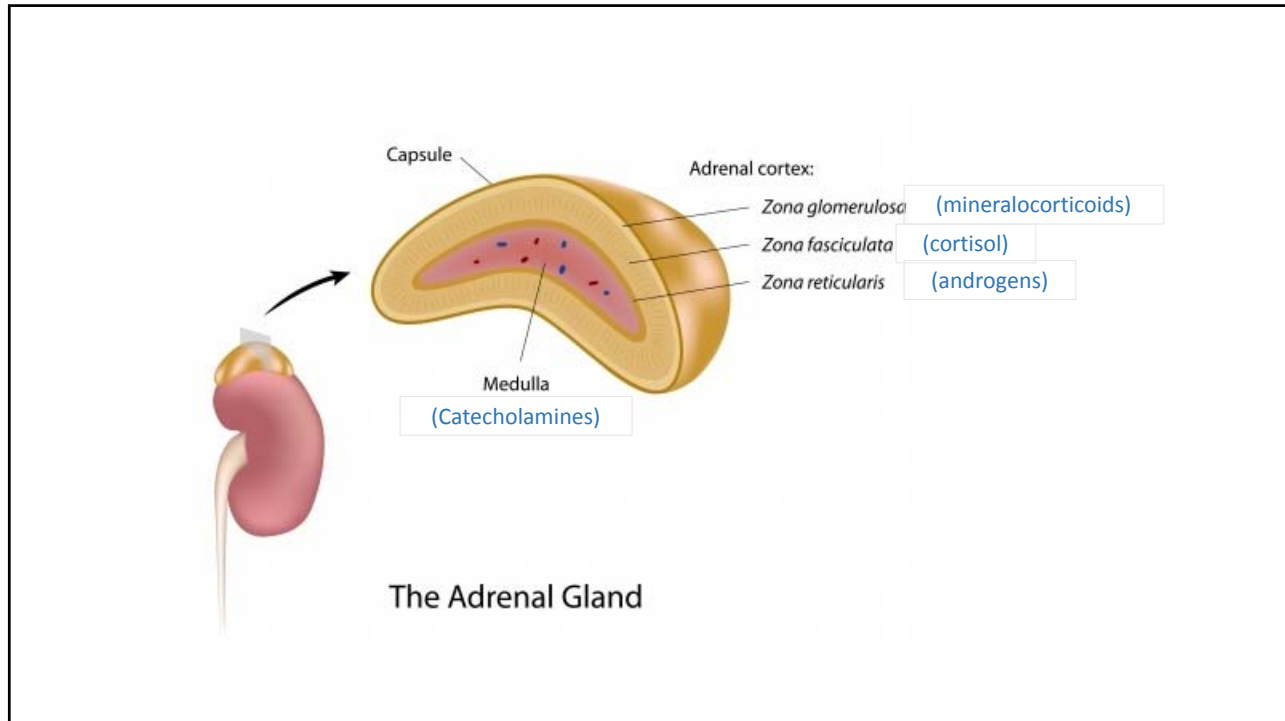
- Hyperglycemia >200 mg/dL
- Acidosis
 - Serum pH <7.30
 - Bicarbonate <15 mEq/L
 - Urine and serum ketones
- Elevated anion gap

Treatment

- Fluids
- Insulin
- Electrolyte monitoring

Acute Adrenal Crisis

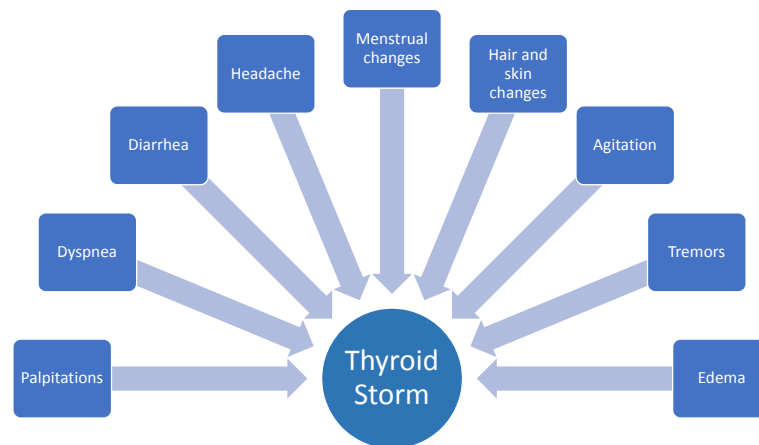




Treatment

- Fluids
- Dextrose
- Hyperkalemia treatment if >6 mEq/L
- IV or IM Hydrocortisone 50 mg/m² (about 3 mg/kg)
 - Mineralocorticoid effect
 - Glucocorticoid effect

Severe Thyrotoxicosis



Treatment

- B – blocker
- +/- Methylprednisolone
- Cooling blanket
- Acetaminophen
- Fluid resuscitation
- Thiourea drugs