PEDIATRIC EMERGENCY MEDICINE EVIDENCE-BASED PATHWAY

DIABETIC KETOACIDOSIS - ASSESSMENT AND ACUTE MANAGEMENT

BCH Emergency Department

UCSF Benioff Children's Hospitals Oakland | San Francisco

DKA Inclusion Criteria:

1. Glucose >200 mg/dL **AND**
2. Ketones (typically ≥2+) **AND**
3. Anion gap acidosis (pH≤7.3 or HCO3≤15)

Special Considerations:

1. Age < 12 months - *consult endocrinology*

Cerebral Edema:

Red Flags:

AMS, decreased HR, increased BP, incontinence, vomiting, irreg respirations, anisocoria, headache, lethargy

Treatment:

Mannitol 0.5-1 g/kg IV over 20 mins, OR 3% saline 5-10mL/kg over 30 mins

AVOID in DKA:

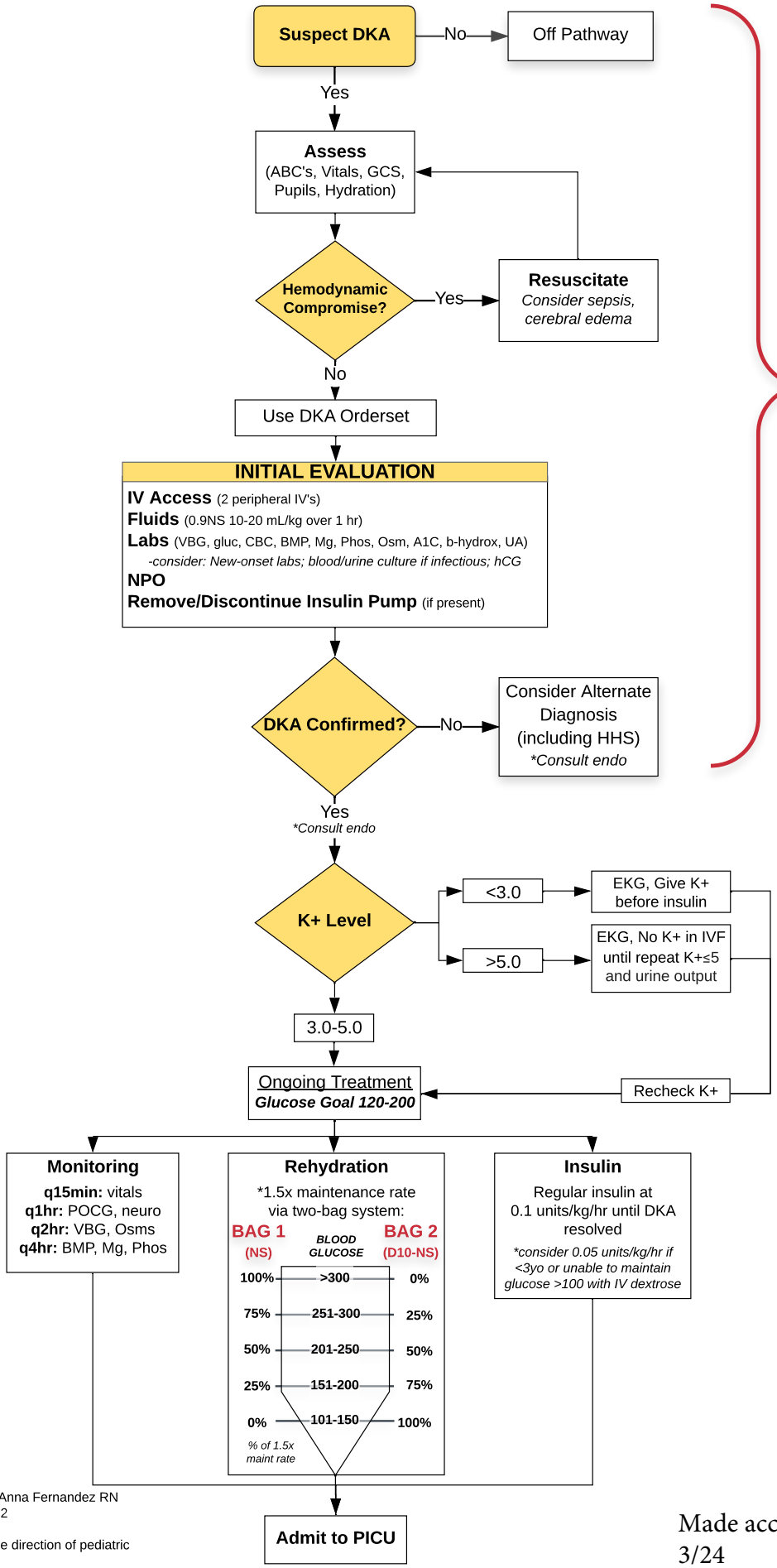
1. Bolus IV Insulin
2. NaHCO3 to correct acid/base
3. Bolus IVF for tachycardia alone
4. Drop in corrected Na by >0.5-1mEq/hr

Protocol Deviation Huddle:

If there is deviation from this protocol (such as decision to use subcutaneous insulin to manage "mild" DKA), a huddle should be performed with PICU and ED attending and Endocrine fellow/attending

*DKA TWO-BAG SYSTEM

- **BAG 1:** Contains 0.9NS +/- electrolytes (typically combination of KCl and KPhos)
- **BAG 2:** Contains D10-0.9NS +/- electrolytes (typically combination of KCl and KPhos)
- If K+ < 3, do not begin insulin until K+ supplementation is initiated
- If K+ = 3-5, IVF should contain K+
- If K+ > 5, IVF should *not* contain K+
- The combination of the two infusions should always equal 1.5x maintenance fluid rate.
- Begin D10-NS when glucose <300
- Optimal glucose decrease rate = 50-100mg/dL/hr
- If blood glucose falls, the insulin infusion is not typically adjusted. Instead, the balance of D10-NS is adjusted. Can also consider increasing D10-NS to D12.5-NS.
- May consider 0.45NS instead of 0.9NS if concerned about or is developing hyperchloremic acidosis.



Authors - Nicholas Stark MD, Israel Green-Hopkins MD, Paula Silva MD, Anna Fernandez RN
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