

## Pediatric DKA Management

(see CHaD DKA protocol on Intranet for full details)

### Definition of DKA:

- Blood glucose  $\geq 250$  mg/dl AND
- Ketonuria AND
- Serum bicarbonate  $< 15$  mEq/L AND/OR
- Capillary pH  $\leq 7.30$

Consult Pediatric Endocrinology  
Arrange for PICU admission

### Fluid deficit replacement:

- Assume fluid deficit of 7.5% (= 75 cc/kg)
  - If hypotensive or  $\downarrow$  peripheral pulses, give 20 cc/kg NS and assume fluid deficit of 10% (= 100 cc/kg)
- Calculate to replace fluid deficit over 48 hours
- Type of fluids: Normal Saline, plus
  - Dextrose (goal blood glucose 100-200 mg/dl while on insulin drip)
    - For blood glucose  $>300$  mg/dl  $\rightarrow$  add no dextrose
    - For blood glucose  $\leq 300$  mg/dl  $\rightarrow$  add 5-10% dextrose
  - Potassium: Add 40 mEq/L of potassium once pt is urinating

### Maintenance fluids (in addition to fluid deficit replacement):

- Maintenance fluid requirements =
  - 4 cc/kg/hr for 1st 10 kg
  - + 2cc/kg/hr for next 10 kg
  - + 1 cc/kg/hr for remaining kg
- Type of fluids: based on Corrected Na = measured Na +  $0.016 \times (\text{glucose} - 100)$ 
  - For Corrected Na  $> 145$  mmol/L  $\rightarrow$  use Normal Saline
  - For Corrected Na  $\leq 145$  mmol/L  $\rightarrow$  use  $\frac{1}{2}$  Normal Saline

### Insulin drip:

- Regular insulin at 0.1 units/kg/hr (no insulin bolus)

### Labs:

- Lytes, BUN/creat, VBG every 2 hrs
- Blood glucose every 60 min
- All urine for glucose and ketones
- Beta-hydroxybutyrate initially and after 4 hrs
- Hgb A1C, IgA and TTG on admission

Watch neurologic status closely  
(risk of cerebral edema)