Emergency KT: DKA / HHNS Management

Patient Meets Criteria for Either DKA or HHNS:

<table>
<thead>
<tr>
<th>DKA</th>
<th>HHNS</th>
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<tbody>
<tr>
<td>1. Glucose ≥ 250 mg/dL</td>
<td>1. Glucose &gt; 600 mg/dL</td>
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<tr>
<td>2. Serum/urine ketone +</td>
<td>2. Serum osmolality &gt; 320</td>
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<td>3. Bicarb ≤ 18 or</td>
<td>3. pH greater &gt; 7.3</td>
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<tr>
<td>4. pH ≤ 7.3</td>
<td>4. Bicarb &gt; 15</td>
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Start IV fluid bolus 2L NS over 1-2 hours

**Fluids**

1. **Calculate TBW Deficit**
   - Click here to access calculator
   - Calculate TBW Deficit
   - Give 1/2 over 1st 6 hours and give 1/2 over next 18 hours

2. **Calculate corrected sodium**
   - Click here to access calculator
   - Calculate corrected sodium
   - Give 0.45% NaCl at 250-500 ml/hour

3. **Potassium**
   - Check renal panel every 2 hours until stable
   - Add 30 mEq KCl to IV fluids
   - pH ≥ 6.9?
     - Yes
     - Add 2 amps (100 mEq) bicarb to 400 ml of sterile water with KCl run @ 200 ml/hr for 1 hour until pH > 7.0.
     - No Bicarb
     - Repeat every 2 hours until pH ≥ 7

4. **Insulin**
   - (0.1 units/kg bolus then 0.1 units/kg/hour)
   - OR 0.14 units/kg/hour
   - If glucose does not fall by 10% over the 1st hour, increase infusion dose
   - When glucose reaches 250 mg/dL:
     1. Add IV 5% dextrose to fluid regimen
     2. Decrease IV insulin to 0.05 units/kg/hour
     3. Maintain glucose between 150 to 250 mg/dL until anion gap closes or hyperosmolality resolves.

5. **Bicarb**
   - pH ≥ 6.9?
     - Yes
     - Add 2 amps (100 mEq) bicarb to 400 ml of sterile water with KCl run @ 200 ml/hr for 1 hour until pH > 7.0.
     - No Bicarb


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1. TBW Deficit = .6 x weight (kg) x Current Na/140

2. Corrected Sodium = Na (mg/dL) + [(glucose (mg/dL) – 100)/100]
1TBW Deficit = .6 x weight (kg) x Current Na/140
http://www.medcalc.com/freewater.html

2Corrected Sodium = Na (mg/dL) + [(glucose (mg/dL) - 100)/100]
http://www.medcalc.com/correctna.html

References