EmergencyKT: Anaphylaxis

ABC’s and IV, O2, Monitor

Diagnose Anaphylaxis? (Box 1)

Yes

Treat as indicated

No

1. Epinephrine 1:1000 IM to lateral thigh
   - 0.3-0.5mg Adult
   - 0.01mg/kg Pediatrics
2. Crystalloid Bolus
   - 1-2 L Adult
   - 30cc/kg Pediatrics
3. Consider sending serum tryptase if within 3h of symptom onset, other labs as clinically indicated (i.e. VBG/lactate)

2nd Line Treatment: Do not proceed unless epinephrine has been given

<table>
<thead>
<tr>
<th>H1 Antagonist</th>
<th>H2 Antagonist</th>
<th>Steroids</th>
<th>Inhaled Beta-Agonist</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Benadryl</strong></td>
<td><strong>Famotidine</strong></td>
<td><strong>Methylprednisolone</strong></td>
<td><strong>Albuterol</strong></td>
</tr>
<tr>
<td>Adult: 25-50mg IV/IM</td>
<td>Adult: 20mg IV</td>
<td>Adult: 80-120mg IV</td>
<td>Adult: 2.5mg/3ml q15-20min x 3 doses</td>
</tr>
<tr>
<td>Peds: 1-1.5mg/kg IV/IM</td>
<td>Peds: 0.25-0.5mg/kg IV</td>
<td>Peds: 1-2mg/kg IV</td>
<td>Peds (&lt;30kg): 1.25mg/3ml q15-20min x 3 doses</td>
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<tr>
<td><strong>OR</strong></td>
<td><strong>OR</strong></td>
<td><strong>OR</strong></td>
<td><em>May substitute Duonebs for initial treatment</em></td>
</tr>
<tr>
<td><strong>Ranitidine</strong></td>
<td><strong>Prednisone</strong></td>
<td></td>
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<tr>
<td>Adult: 50mg IV</td>
<td>Adult: 40-60mg PO</td>
<td></td>
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</tr>
<tr>
<td>Peds: 0.5-1mg/kg IV</td>
<td>Peds: 1-2mg/kg PO</td>
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</tbody>
</table>

Reassess 5-15 minutes

Continue on Pg. 2

Yes

Symptomatic?

No

Is Pt. High Risk? (Box 2)

Yes

Observe 4-6h in ED

No

Yes

Symptom Free?

Yes

Consider ED Observation unit vs inpatient admission

No

1) Obtain PCP follow up, or call Allergy fellow for follow up
2) Prescribe Epi-Pen and provide teaching on how to use
3) Strict return precautions
4) D/C home with 5 day course of:
   - Predisone 40-60mg PO daily
   - Benadryl 25mg PO q6 PRN
   - Famotidine 20-40mg PO daily
Consider ED Observation Unit VS Discharge Home

1) Obtain PCP follow up, or call Allergy fellow for follow up
2) Prescribe Epi-Pen and provide teaching on how to use
3) Strict return precautions
4) D/C home with 5 day course of:
   - Prednisone 40-60mg PO daily
   - Benadryl 25mg PO q6 PRN
   - Famotidine 20-40mg PO daily

Symptomatic (Continued from Pg. 1)

Anaphylaxis?

No

Symptomatic?

No

Admit to Medical stepdown vs ICU

Persistent Hypotension? (Box 3)

No

Admit to ED Observation unit vs inpatient floor with telemetry (depending on co-morbid conditions)

Yes

Admit to ICU

Yes

1) Repeat Epinephrine: 1:1000 0.3-0.5mg IM in lateral thigh (0.01mg/kg pediatrics)
2) Repeat crystalloid bolus if hypotension

Reassess 5-15 minutes

Yes

Admit to ICU

No

Anaphylaxis?

Yes

Yes

Admit to ICU

No

Persistent Hypotension? (Box 3)

1) Initiate epinephrine drip
   - Adult 2-10 mcg/min
   - Peds 0.05-1 mcg/kg/min
2) Consider glucagon for refractory hypotension or on beta-blockers
   - Adult: 1-5mg IV over 5 min
   - then, 5-15 mcg/min infusion if response
   - Peds: 50mcg/kg q5min
3) Consider vasopressin if continued refractory hypotension
   - Adult: 2-8u IV
Box 1- Anaphylaxis Definition

Anaphylaxis is highly likely when any one of the following three criteria are met:

1. Acute onset of an illness (minutes to hours) with involvement of the skin, mucosal tissue or both (e.g. generalized hives, flushing, pruritus, swollen lips/tongue/uvula)

   AND at least one of the following:
   A. Respiratory compromise (dyspnea, wheeze, stridor, hypoxemia)
   B. Reduced BP or symptoms of end-organ dysfunction (syncope, hypotonia/collapse, incontinence)

2. Two or more that occur rapidly after exposure to a likely allergen (minutes to hours)
   A. Involvement of skin and/or mucosal tissue (e.g., generalized urticaria, itch-flush, swollen lips-tongue-uvula)
   B. Respiratory compromise (e.g., dyspnea, wheeze-bronchospasm, stridor, reduced PEF, hypoxemia)
   C. Reduced BP or associated symptoms (e.g., hypotonia/collapse, syncope, incontinence)
   D. Persistent GI symptoms (cramping abdominal pain, vomiting)

3. Reduced BP after exposure to a known allergen
   A. Infants/Children: low systolic BP for age OR > 30% decrease in systolic BP
   B. Adults: SBP < 90 or > 30% decrease from baseline SBP
   C. Peds calculations
      <70mmHg SBP for 1-12mos
      < 70mmHg + 2 x age from 1-10yr
      < 90mmHg for 11-17yr (adult criteria)

Box 2- High Risk features

- Any hypotension
- Initial laryngeal edema
- Syncope or respiratory distress as presenting complaint
- History of asthma
- B-blocker use
- History of prior biphasic reaction
- Unreliable patient/Social situation

Box 3- Hypotension

A. Infants/Children: low systolic BP for age OR > 30% decrease in systolic BP

B. Adults: SBP < 90 or > 30% decrease from baseline SBP