EmergencyKT: Angioedema

A: Initial Assessment: ABCDE
- Airway: Prepare to intubate for stridor, dysphonia, tongue/laryngeal edema
- Breathing: Supplemental O2 to keep SpO2 ≥ 92%
- Circulation: 2 large bore IVs. NS bolus 20ml/kg, Trendelenburg
- Disability: Assess for AMS
- Exposure: Remove clothing to look for skin changes

Patient presenting with swelling concerning for angioedema

Does patient need emergent airway?
- Yes → Proceed to awake fiberoptic intubation
- No → Emergent cricothyrotomy

Anaphylaxis vs histaminergic angioedema
- Yes → Intubation successful?
- No → Follow anaphylaxis guidelines (emergencykt.com)

Clear signs of histaminergic swelling?
- Yes → Treat with anti-histamines, steroids, consider epinephrine for airway involvement
- No → Non-histaminergic angioedema

Non-histaminergic angioedema
- Known HAE?
- Yes → Reversal decision made with allergy/immunology and pharmacy
  - Known Type I/II HAE, treat with specific reversal agents (Table 2, pg. 2)
  - Reversal decision made with allergy/immunology and pharmacy
  - Ecallantide – 30mg SQ
  - Berinert – 20U/kg IV
  - Consider FFP 1-3U for refractory cases
- No/Unknown → Order C4 level if patient not on ACEi
  - Disposition per Table 1 (Page 2)

Improvement of symptoms?
- Yes → Disposition per anaphylaxis protocol
- No → Non-histaminergic angioedema

Likely histaminergic response
- Yes → Allergic trigger?
- No → Disposition per Table 1 (Page 2)

B: Consider NP scope:
To evaluate for asymptomatic laryngeal swelling if any complaint/ evidence of lingular swelling

C: Signs of histaminergic swelling include:
- Urticaria, pruritus, known trigger. Anaphylaxis criteria based on NIAID/FAAN guidelines

D: Categories of non-histaminergic angioedema
- Hereditary Angioedema (HAE)
- Acquired Angioedema
- ACEI Induced
- Allergic
- Idiopathic

Concern for non-histaminergic angioedema.
Order C4 and tryptase level.
Disposition per Table 1 (Page 2)

9-24-13
### Table 1.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Clinical Findings</th>
<th>Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Facial rash, facial edema, lip edema</td>
<td>Home vs admission</td>
</tr>
<tr>
<td>II</td>
<td>Soft palate edema</td>
<td>Home vs admission</td>
</tr>
<tr>
<td>III</td>
<td>Lingual edema</td>
<td>ICU</td>
</tr>
<tr>
<td>IV</td>
<td>Laryngeal edema</td>
<td>ICU</td>
</tr>
</tbody>
</table>

### Table 2.

<table>
<thead>
<tr>
<th>Med</th>
<th>Dosing</th>
<th>Mechanism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasma derived C1-INH (Berinert)</td>
<td>20U/kg IV</td>
<td>C1-INH replacement</td>
</tr>
<tr>
<td>Ecallantide (Kalbitor)</td>
<td>30mg SQ</td>
<td>Kallikrein inhibitor</td>
</tr>
<tr>
<td>Icatibant (Firazyr)</td>
<td>30mg SQ</td>
<td>Bradykinin-2 receptor antagonist</td>
</tr>
<tr>
<td>Recombinant C1-INH (Ruconest)</td>
<td>50U/kg IV</td>
<td>C1-INH replacement</td>
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