Project: Ghana Emergency Medicine Collaborative

Document Title: Anaphylaxis

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Definition

- A rapid onset allergic reaction which may be life threatening

- True emergency – requires immediate diagnosis and Rx

Terminology

- Anaphylaxis - IgE mediated after previous exposure
- Anaphylactoid - not IgE but immune complex complement mediated; no prior exposure required
- Therapeutically identical

Common Causes

- Drugs
  - b lactam antibiotics: penicillins and cephalosporins
  - aspirin and other NSAIDs
  - sulfa drugs
  - aminoglycosides

Common Causes

- Foods and additives – more common in children
  - shellfish
  - nuts
  - milk
  - eggs
  - sulfites
  - wheat
  - soybeans

Common Causes

- Stings
- Vaccines
- Latex
- X-Ray contrast material

Pathophysiology

- Release of vasoactive and bronchial mediators from mast cells and basophils (histamines, prostaglandins, leukotrienes, etc.)

Clinical Picture

- 2 or more of following:

skin
- pruritus
- urticaria

respiratory

upper airway
- lump in throat
- hoarseness
- stridor

lower airway
- bronchoconstriction
- wheezing

Clinical Picture

- Hypotension - distributive shock
- GI - cramps and vomiting

Clinical Picture

- Rapid onset - minutes to hours, most within 1 hour

Recurrence

- Up to 20% recur within 8 hours

Treatment

- 1st line:
- Epinephrine

  - has both alpha and beta-2 effects

  - reduces mucosal edema, reduces capillary leakage, vasoconstricts, bronchodilates

Treatment

- Epinephrine dosing and administration
  - 0.3 (kids) to 0.5 mg (adults); (0.3-0.5ml of 1:1000) IM in thigh
  - Repeat q 5 min as necessary
  - Epinephrine auto injector (Epipen) is easiest and safest (comes in 0.3 and 0.5 mg dosages)

Treatment

- Epinephrine – if refractory to IM Rx or cardiovascular collapse – 0.1 mg IV epi over 5-10 minutes (0.1 mg of the 1:10,000)

Treatment

- Shock – IV fluids wide open

Treatment

- IV steroids and antihistamines (H1 and H2 blockers) to prevent recurrence

Observation

- Admit or observe for 8 hours to watch for recurrence