Suspected anaphylaxis?

Common triggers[6,8,10-12]**:**
- Insects (e.g., bees, wasps, hornets, fire ants)
- Drugs (e.g., antibiotics, contrast and chemotherapy agents)
- Transfusions
- Vaccines
- Other (e.g., temperature, exercise)

Diagnostic criteria
1. No known allergen exposure *but*
   - Cutaneous signs *plus* respiratory *or* cardiovascular signs
2. Likely or known allergen exposure *and* ≥ 2 of the following:
   - Cutaneous, respiratory, cardiovascular, gastrointestinal signs
3. Known allergen exposure *and*
   - Cardiovascular signs (e.g., hypotension)

Positive

Negative

Clinical signs (sudden onset)*
- Dermal (e.g., erythema, angioedema, pruritus, urticaria)
- Gastrointestinal (e.g., nausea, vomiting, diarrhea)
- Cardiovascular (e.g., tachycardia, hypotension, arrhythmias, arrest)
- Respiratory (e.g., tachypnea, dyspnea, congestion, stridor, cough, upper airway edema, cyanosis, arrest)
- Neurologic (e.g., syncope, weakness, seizures)
- Ocular (e.g., lacrimation, conjunctival injection, pruritus)

**The faster the signs appear, the more severe the anaphylaxis.*

Differentials to investigate
- Severe asthma (cats mainly)
- Vasovagal event (syncope)
- Neoplasia (e.g., pheochromocytoma, mastocytosis)
- Other

Check
- **A**irway
- **B**reathing
- **C**irculation (including volume status)
- **D**isability (mentation status)
- **E**xposure (any potential allergen)

Monitoring and diagnostics
- Blood pressure
- SpO_2
- Capillary refill time
- Temperature
- Mentation status
- Electrocardiography
- Point-of-care ultrasonography[8,9]
- Cavitary effusion? Gallbladder wall edema?
- PCV/TS (peripheral +/– effusion)
- Blood glucose
- Lactate
- CBC, chemistry, PT, and aPTT

If evidence of respiratory distress (SpO_2 < 95%, PaO_2 < 80 mm Hg), provide oxygen therapy.
- Oxygen therapy technique based on severity
- Consider albuterol (1–2 puffs q15min; up to 3 doses) or terbutaline (0.01 mg/kg IM or IV).

If blood glucose < 60 mg/dL:
- Administer dextrose 50% (0.5–1 mL/kg IV bolus diluted 1:2), followed by 2.5% to 5% CRI.

If hypotensive (SBP < 90 mm Hg or MAP < 65 mm Hg), immediately administer epinephrine.
- 0.2–0.5 mg IM total (can repeat q5-15min) or 0.01 IV bolus
- 0.05 µg/kg/min, CRI

If hypovolemic and/or hypotensive (SBP < 90 mm Hg or MAP < 65 mm Hg), administer fluid therapy.
- Replacement, balanced crystalloid bolus(es)
- 5–20 mL/kg over 5–15 min

Unstable cases: 24–72 hours of monitoring, at least

If hypotension persists, administer other vasopressors.*
1. Norepinephrine (0.05–1 µg/kg/min IV) or dopamine** (5–20 µg/kg/min IV)
2. Vasopressin (0.5–5 mU/kg/min IV), dogs

**Dilute as recommended*
***If norepinephrine is unavailable*

Additional treatment
- Antihistamines (possible sole therapy if stable)
  - Diphenhydramine (1–4 mg/kg IM, dogs; 0.5–2 mg/kg IM, cats)
- Glucocorticoids
  - Dexamethasone SP (0.1 mg/kg IV once)
  - Prednisone (0.5–1 mg/kg PO PRN)
- Liver protectants, dogs
- Antinausea/antiemetic/antiulcer drugs

aPTT = activated partial thromboplastin time; CRI = continuous rate infusion; ER = emergency room; MAP = mean arterial pressure; PaO_2 = arterial partial pressure of oxygen; PRN = pro re nata or "as needed"; PT = prothrombin time; SBP = systolic blood pressure; SpO_2 = pulse oximetry; TS = total solids

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