Table 8. Differentiating Between Vasovagal and Anaphylaxis

	Vasovagal	Anaphylaxis
Onset	Immediate, usually within minutes	Typically within 30 minutes
Neurologic	Fainting sensation, light headedness, dizziness	Sense of severe anxiety and distress
Respiratory	Normal breathing, no cough, no hoarseness	Dyspnea, wheezing, stridor, hypoxemia, inability to maintain airway patency, persistent cough, throat clearing
Cardiovascular	Bradycardia, hypotension	Tachycardia, hypotensive
Gastrointestinal	Nausea, vomiting	Abdominal cramps, diarrhea, nausea, vomiting
Skin	Generalized pallor, cool, clammy skin, absence of urticaria and angioedema	Pruritis, generalized erythema, urticaria, angioedema

bradycardia and hypotension can aid in distinguishing a vasovagal attack from anaphylaxis (Refer to **Table 8**).

Clinicians should educate patients and their caregivers about the signs and symptoms of anaphylaxis. An emergency action plan that includes instructions for using epinephrine should be reviewed with patients on AIT. This discussion should be part of the informed consent surrounding AIT and documented in the patient's medical record. Epinephrine is an effective first-line treatment of all systemic symptoms and should be used early when treating SRs.[233-236] Epinephrine is universally recommended as the first-line treatment for anaphylaxis administered intramuscularly into the vastus lateralis (antero-lateral thigh).[89] Intramuscular epinephrine should be given at a dose of 0.01 mg/kg of 1 mg/mL (1:1000), up to 0.5 mg in adults and 0.3 mg in children and teenagers. There are no absolute contraindications to its use for anaphylaxis.[89,227] Clinicians should administer additional doses of intramuscular epinephrine every 5 to 15 minutes if anaphylaxis signs or symptoms persist.[234,237-239]

Additional emergency management includes placing the patient in a supine position if their presentation is mainly cardiovascular, monitoring vital signs, and administration of oxygen to patients with respiratory distress and those receiving further doses of epinephrine.[234,237-239] Intravenous fluids are to be administered early with the first epinephrine dose to patients with cardiovascular involvement and should be repeated if lack of response. Intravenous fluids, such as normal saline, should also be given in severe anaphylaxis with a respiratory presentation if a second dose of intramuscular epinephrine is required.[234] Patients with lower respiratory symptoms (eg, chest tightness, wheezing, shortness of breath) should receive inhaled beta-2 agonists following initial treatment with epinephrine (Refer to **Figure 5**).[3,89,227,234,237,238,240]

Biphasic anaphylaxis is a recurrence of anaphylaxis after appropriate treatment. The "Anaphylaxis—A 2020 Practice Parameter Update" suggests that clinicians incorporate severity of anaphylaxis presentation and/or the administration of >1 dose of epinephrine for the treatment of initial anaphylaxis as a guide to determining a patient's risk for developing biphasic anaphylaxis.[89] Additional predictors of biphasic reactions have included wide pulse pressure, unknown anaphylaxis trigger, skin/mucosal signs and symptoms, and drug trigger in children.[89,241] Extended clinical observation is suggested in a setting capable of managing anaphylaxis (to detect a biphasic reaction) for patients with resolved severe anaphylaxis and/or those who need >1 dose of epinephrine.[89]

Antihistamines are often included as adjunctive therapy for cutaneous signs and symptoms associated with anaphylaxis, but they should not be administered before, or in place of, epinephrine. Similarly, glucocorticoids are also frequently used as adjunctive therapy in the treatment of anaphylaxis but also should not be administered prior to, or in place of, epinephrine as they have no proven role in the treatment of an acute reaction due to their slow onset of action.[240,242] Antihistamines and/or glucocorticoids are not reliable interventions to prevent biphasic anaphylaxis. The "Anaphylaxis—A 2020 Practice Parameter Update" recommended against the use of antihistamines and glucocorticoids to prevent biphasic anaphylaxis in adults.[89]

Statement 11: Retesting During AIT

Clinicians should avoid repeat allergy testing as an assessment of the efficacy of ongoing AIT unless there is a change in environmental exposures or a loss of control of symptoms.

Evidence Strength: Recommendation based on CPG, placebo-controlled, and randomized clinical trials with a preponderance of benefit over harm.

Action Statement Profile: 11

- Quality improvement opportunity: Reducing unnecessary testing; making quality care more affordable (National Quality Strategy Domain: Prevention and Treatment of Leading Causes of Morbidity and Mortality, Making Quality Care More Affordable)
- Aggregate evidence quality: Grade B, based on CPGs, placebo-controlled RCTs
- Level of confidence in the evidence: Low for correlation of testing during AIT and clinical response; high for immunomodulation of testing during AIT