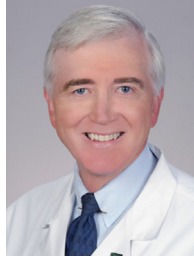


Preface

Anaphylaxis Is a Continuum and Should Be Treated with Epinephrine Early



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Editors

Anaphylaxis is an acute, systemic syndrome, usually affecting multiple organs, with clinical features consistent with those that follow allergen exposure, typically by ingestion or injection, of an allergic individual. The absence of a gold standard for diagnosis or a universally accepted definition of this syndrome complicates real-time clinical management. Anaphylaxis is relevant to all clinicians.

Severity of anaphylaxis, for example, evidence of cardiovascular collapse or respiratory distress, is utilized by some to distinguish acute systemic reactions from anaphylaxis. A definition based on severity is useful for research and epidemiologic studies but is less useful for treatment decisions, since epinephrine treatment is more effective when administered prior to the onset of severe manifestations (ie, cardiovascular collapse and/or respiratory distress). The unpredictable potential and pace of progression from mild anaphylaxis, or systemic reactions, to life-threatening anaphylaxis further complicate decision making.

There is debate as to the clinical value of dividing systemic reactions from anaphylaxis due to the following:

1. Efficacy of intramuscular (IM) epinephrine in both systemic reactions and anaphylaxis
2. Greater efficacy of IM epinephrine administered in the early phase of anaphylaxis, when it is more difficult to distinguish from a systemic reaction, compared with administration in the more severe stage of anaphylaxis
3. Variability in the rate of progression from mild anaphylaxis, or a systemic reaction, to life-threatening manifestations
4. Negligible toxicity of IM epinephrine therapy at a dose of 0.01 mg/kg

The editors of this issue prefer the concept of anaphylaxis as a continuum, extending from a grade 1 systemic reaction (cutaneous or upper respiratory without cutaneous) to

grade 4/5 (cardiovascular collapse and/or respiratory distress).¹ The intent is that all grades should be assessed and judged by circumstance as to advisability of the early intervention with IM epinephrine rather than withholding epinephrine treatment until severe manifestations occur. All grade 1 reactions do not progress, and all anaphylaxis episodes do not start with grade 1 and progress in a stepwise fashion. This unpredictable variability challenges even the most experienced clinician to assess the potential for severe anaphylaxis. Uncertainty of outcome coupled with an unjustified safety concern of IM epinephrine, utilized in recommended doses, may result in unnecessary treatment delay. The editors acknowledge that there is a debate with respect to terminology, but we advocate for a clinical definition of anaphylaxis as a *continuum* rather than a binary, yes/no definition. Epinephrine should be used at the onset of the reaction and not delayed until the patient has hypotension and/or respiratory difficulty.

This issue begins with articles devoted to *Definition*, *Epidemiology*, and *Pathophysiology*. This introduction is followed by articles devoted to causes of systemic reactions or anaphylaxis, such as *Mast Cell Disorders*, *Food Allergy*, *Allergen Immunotherapy*, *Drugs*, including *Biologics* and *Perioperative Agents*, and *Stinging Insect Venom*. Next, the *Management of Anaphylaxis* is discussed with a separate article for the unique challenges of recognizing and treating *Anaphylaxis in Infants and Toddlers*. The final articles include *Data Gaps and Research Needs*, as well as *Patient Communications*. The intent is to provide the reader summaries of high-yield topics relevant to clinical practice. The authors utilized the most up-to-date literature in their reviews. The editors thank the authors for their contributions and the support of the publisher, Elsevier, for making this issue possible.

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