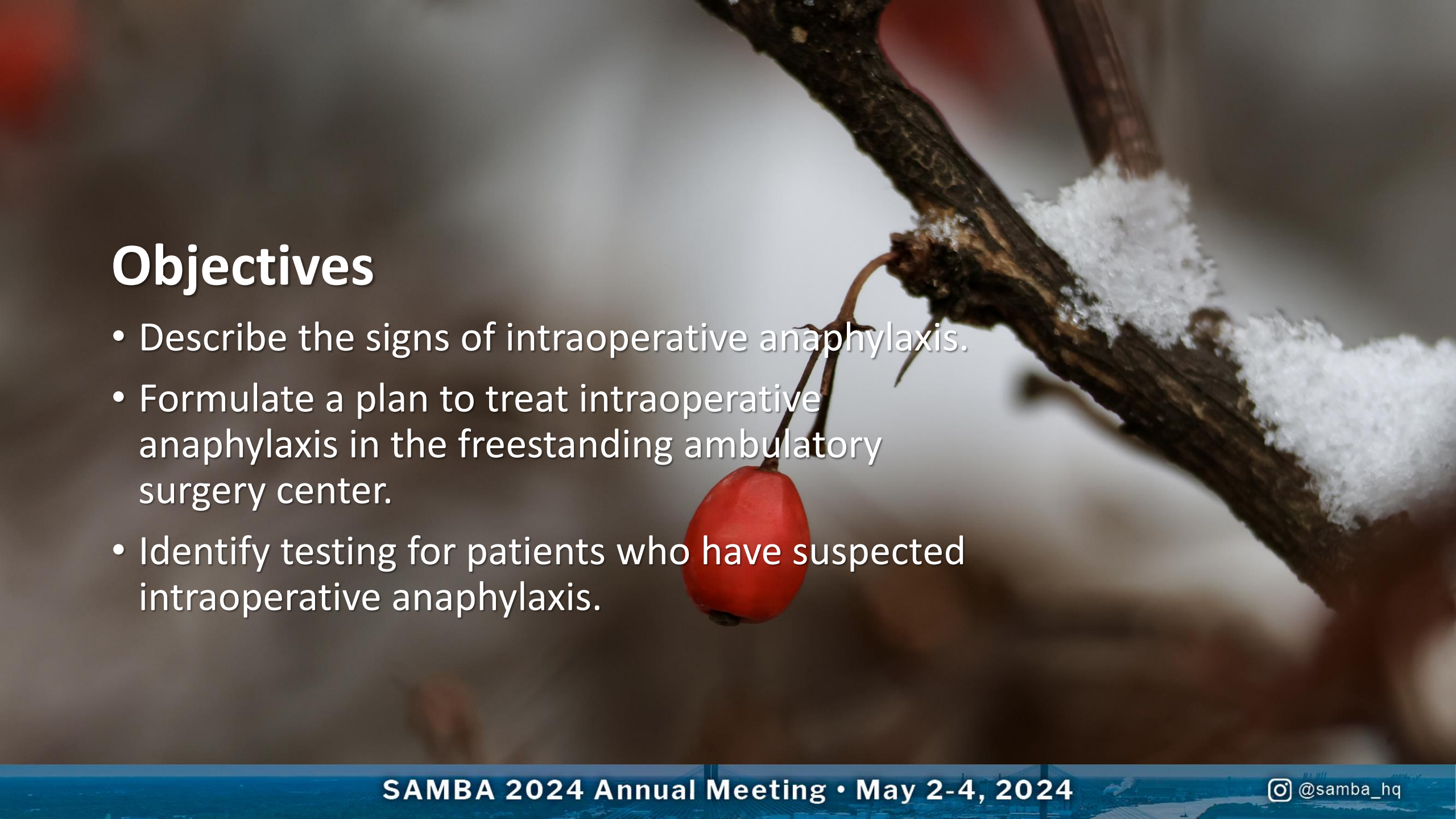
Spoiler Alert!

SOCIETY FOR AMBULATORY ANESTHESIA
Outpatient • Office Based • Non-Operating Room
@samba_hq

SAMBA 2024 Annual Meeting
May 2-4, 2024

Intraoperative Anaphylaxis

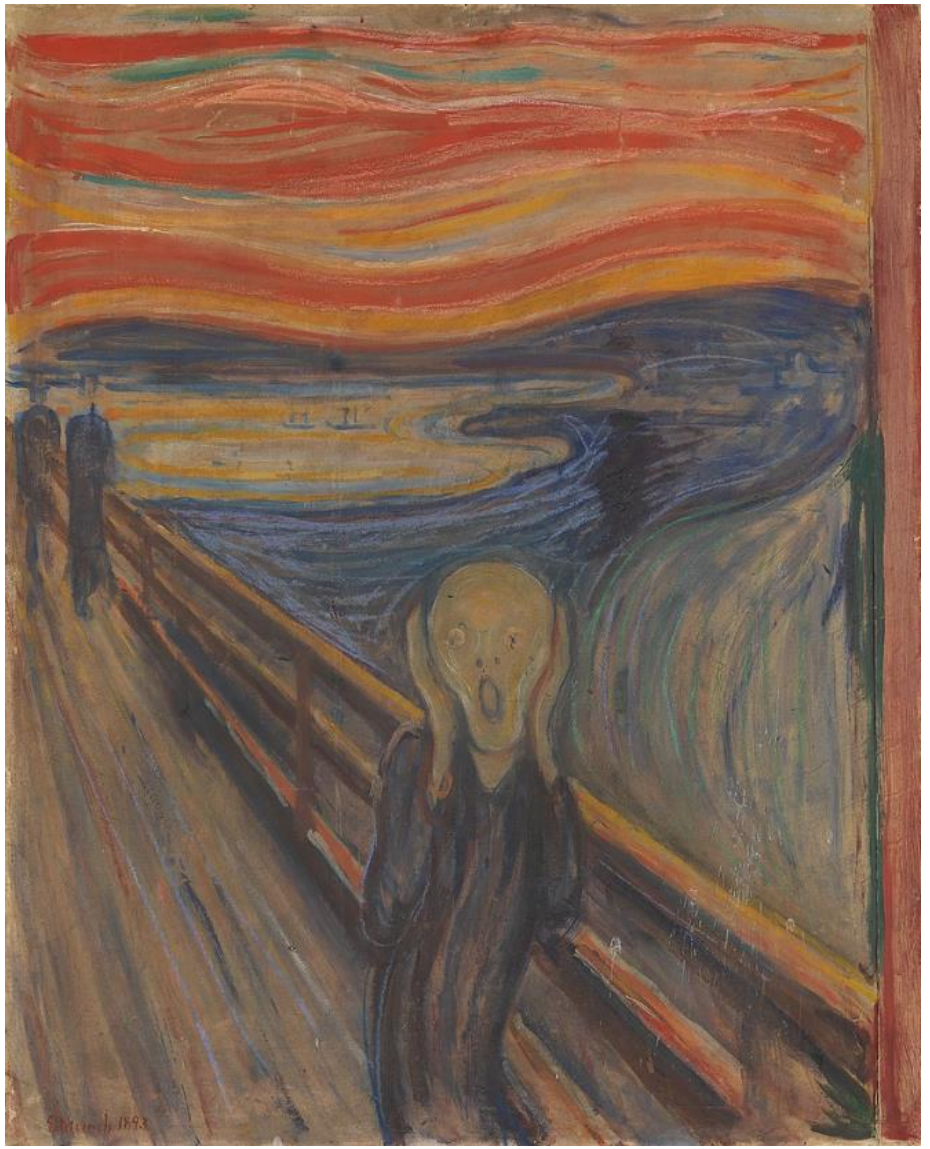
Kara M. Barnett, MD, FASA, SAMBA-F
Memorial Sloan Kettering Cancer Center
Director of Anesthesia Services, MSK Monmouth
Society for Ambulatory Anesthesia Director
BarnettK@mskcc.org



Objectives

- Describe the signs of intraoperative anaphylaxis.
- Formulate a plan to treat intraoperative anaphylaxis in the freestanding ambulatory surgery center.
- Identify testing for patients who have suspected intraoperative anaphylaxis.

Anaphylaxis



Severe

Life-Threatening

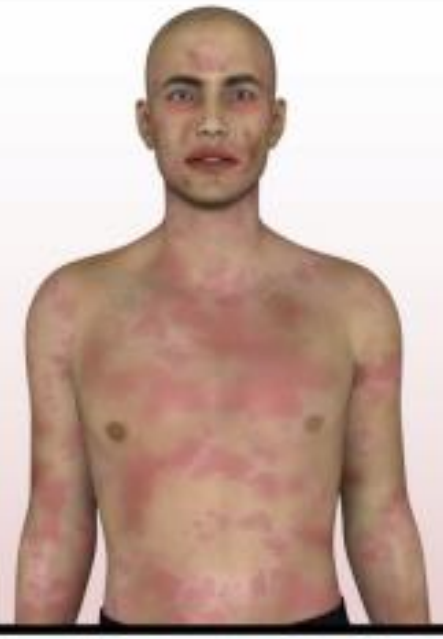
Systemic

Allergic Reaction

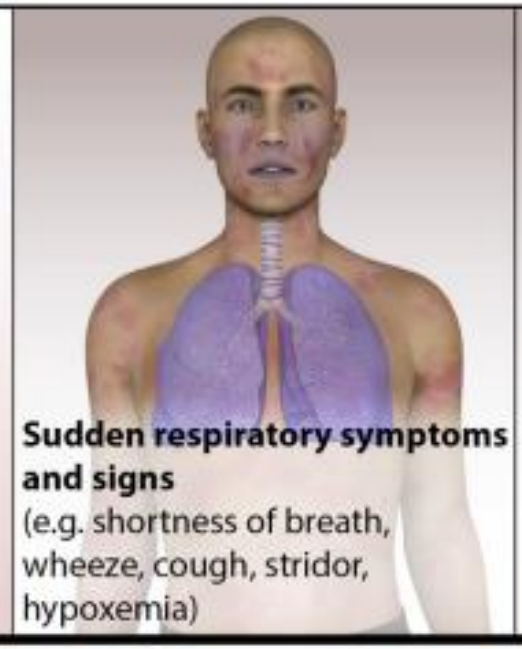
J Allergy Clin Immunol. 2020;145(4):1082-1123.

SOCIETY FOR AMBULATORY ANESTHESIA
Outpatient • Office Based • Non-Operating Room
www.SAMBAhq.org

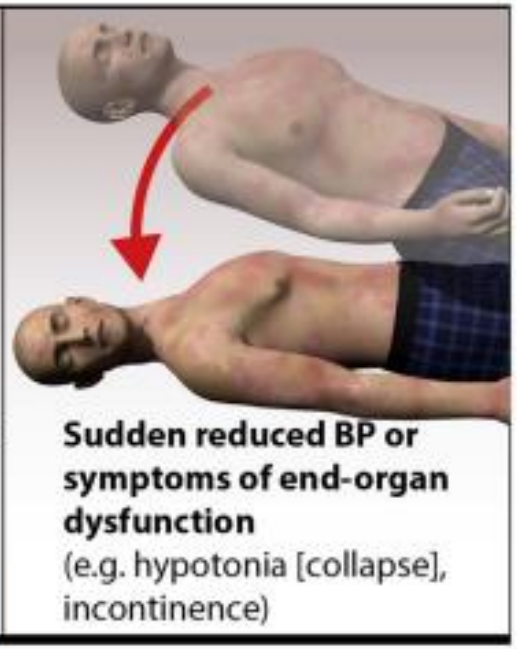
1 Sudden onset of an illness (minutes to several hours), with involvement of the skin, mucosal tissue, or both (e.g. generalized hives, itching or flushing, swollen lips-tongue-uvula)



AND AT LEAST ONE OF THE FOLLOWING:



Sudden respiratory symptoms and signs
(e.g. shortness of breath, wheeze, cough, stridor, hypoxemia)



Sudden reduced BP or symptoms of end-organ dysfunction
(e.g. hypotonia [collapse], incontinence)

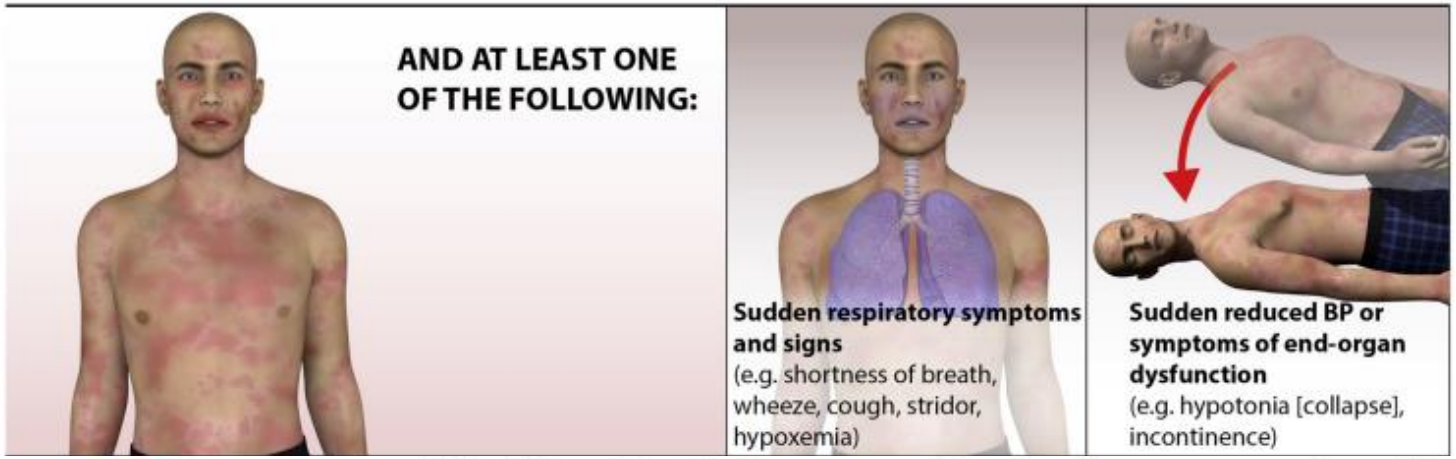
Criteria

J Allergy Clin Immunol. 2020;145(4):1082-1123.

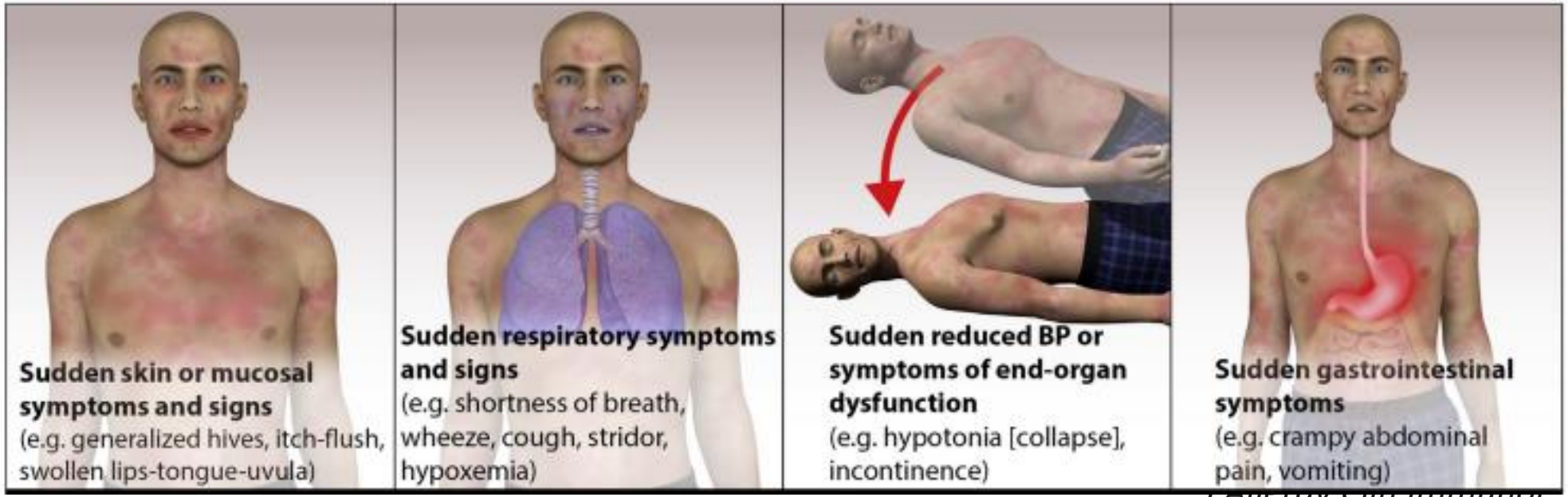
SOCIETY FOR AMBULATORY ANESTHESIA
Outpatient • Office Based • Non-Operating Room
www.SAMBAhq.org

Criteria

1 Sudden onset of an illness (minutes to several hours), with involvement of the skin, mucosal tissue, or both (e.g. generalized hives, itching or flushing, swollen lips-tongue-uvula)



OR **2** Two or more of the following that occur suddenly after exposure to a *likely allergen or other trigger* for that patient* (minutes to several hours)

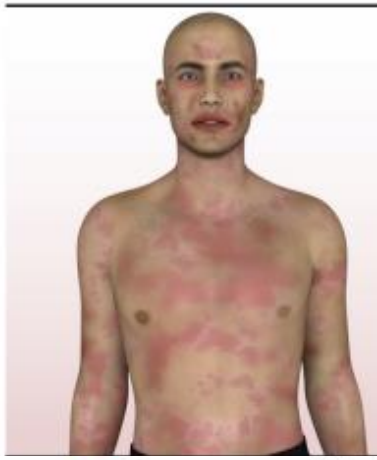


J Allergy Clin Immunol. 2020;145(4):1082-1123.

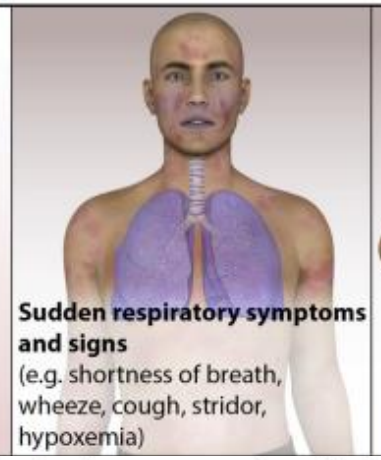
SOCIETY FOR AMBULATORY ANESTHESIA
Outpatient • Office Based • Non-Operating Room
www.SAMBAhq.org

Criteria

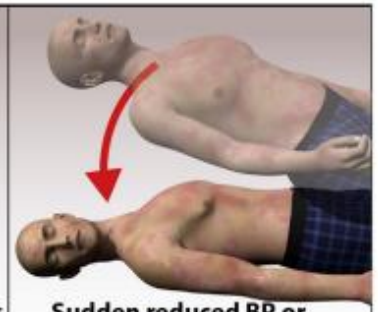
1 Sudden onset of an illness (minutes to several hours), with involvement of the skin, mucosal tissue, or both (e.g. generalized hives, itching or flushing, swollen lips-tongue-uvula)



AND AT LEAST ONE OF THE FOLLOWING:

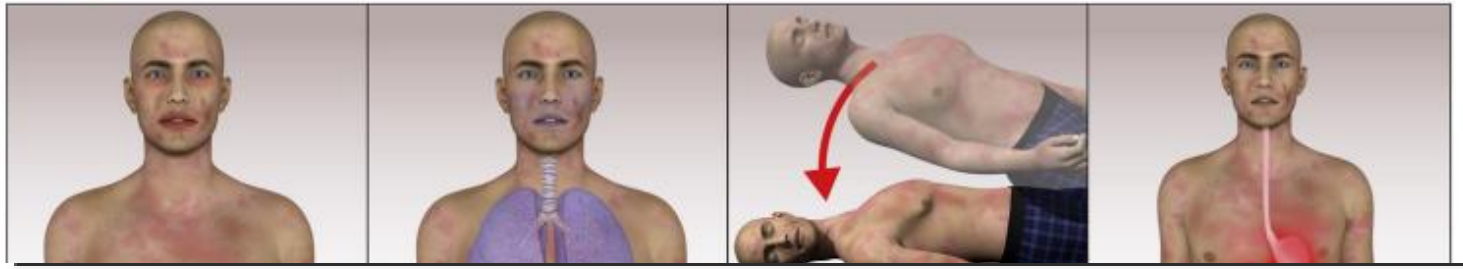


Sudden respiratory symptoms and signs
(e.g. shortness of breath, wheeze, cough, stridor, hypoxemia)



Sudden reduced BP or symptoms of end-organ dysfunction
(e.g. hypotonia [collapse], incontinence)

OR 2 Two or more of the following that occur suddenly after exposure to a *likely allergen or other trigger* for that patient* (minutes to several hours)



OR 3 Reduced blood pressure (BP) after exposure to a *known allergen** for that patient* (minutes to several hours)

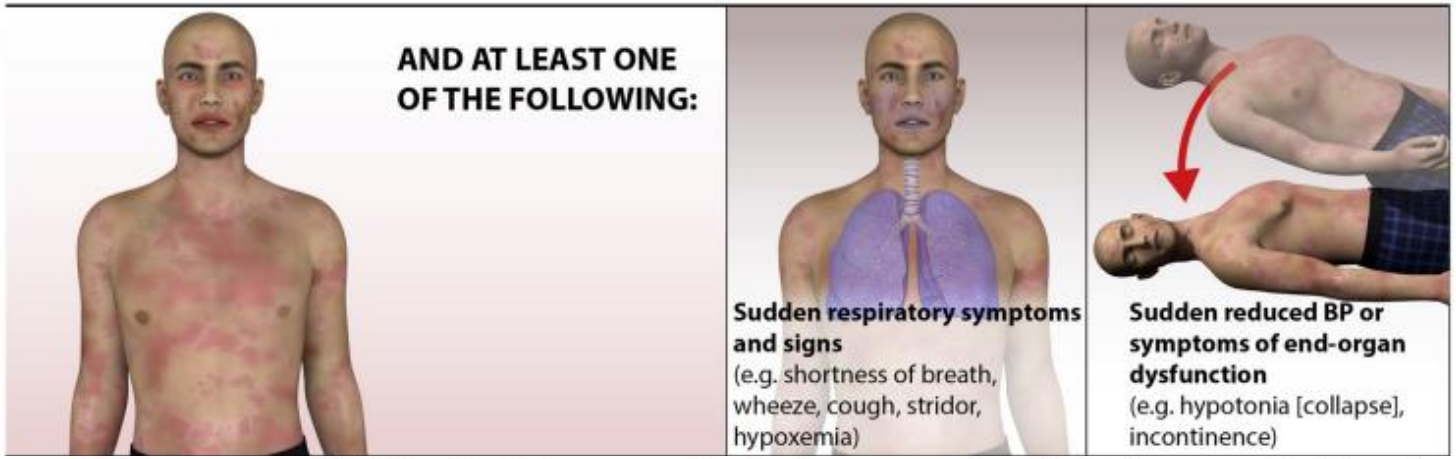
Infants and children: low systolic BP (age specific) or greater than 30% decrease in systolic BP ***

Adults: systolic BP of less than 90 mm Hg or greater than 30% decrease from that person's baseline

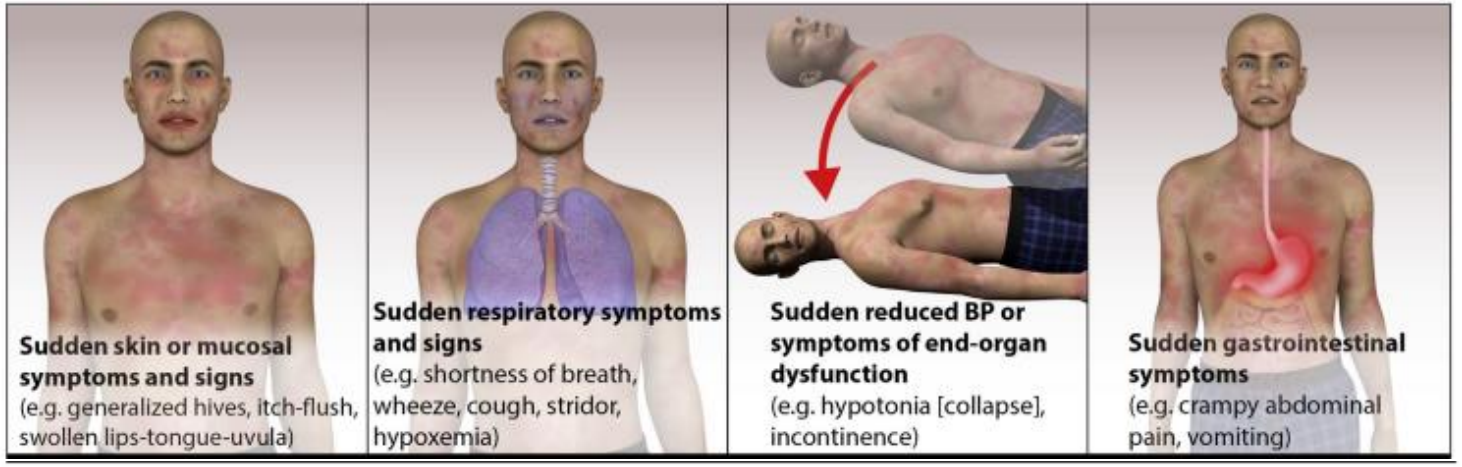
SOCIETY FOR AMBULATORY ANESTHESIA
Outpatient • Office Based • Non-Operating Room
www.SAMBAhq.org

Criteria

1 Sudden onset of an illness (minutes to several hours), with involvement of the skin, mucosal tissue, or both (e.g. generalized hives, itching or flushing, swollen lips-tongue-uvula)



OR **2** Two or more of the following that occur suddenly after exposure to a *likely allergen or other trigger* for that patient* (minutes to several hours)



OR **3** Reduced blood pressure (BP) after exposure to a *known allergen** for that patient* (minutes to several hours)

J Allergy Clin Immunol. 2020;145(4):1082-1123.

Anesthesia Complicates Things

Hypotension

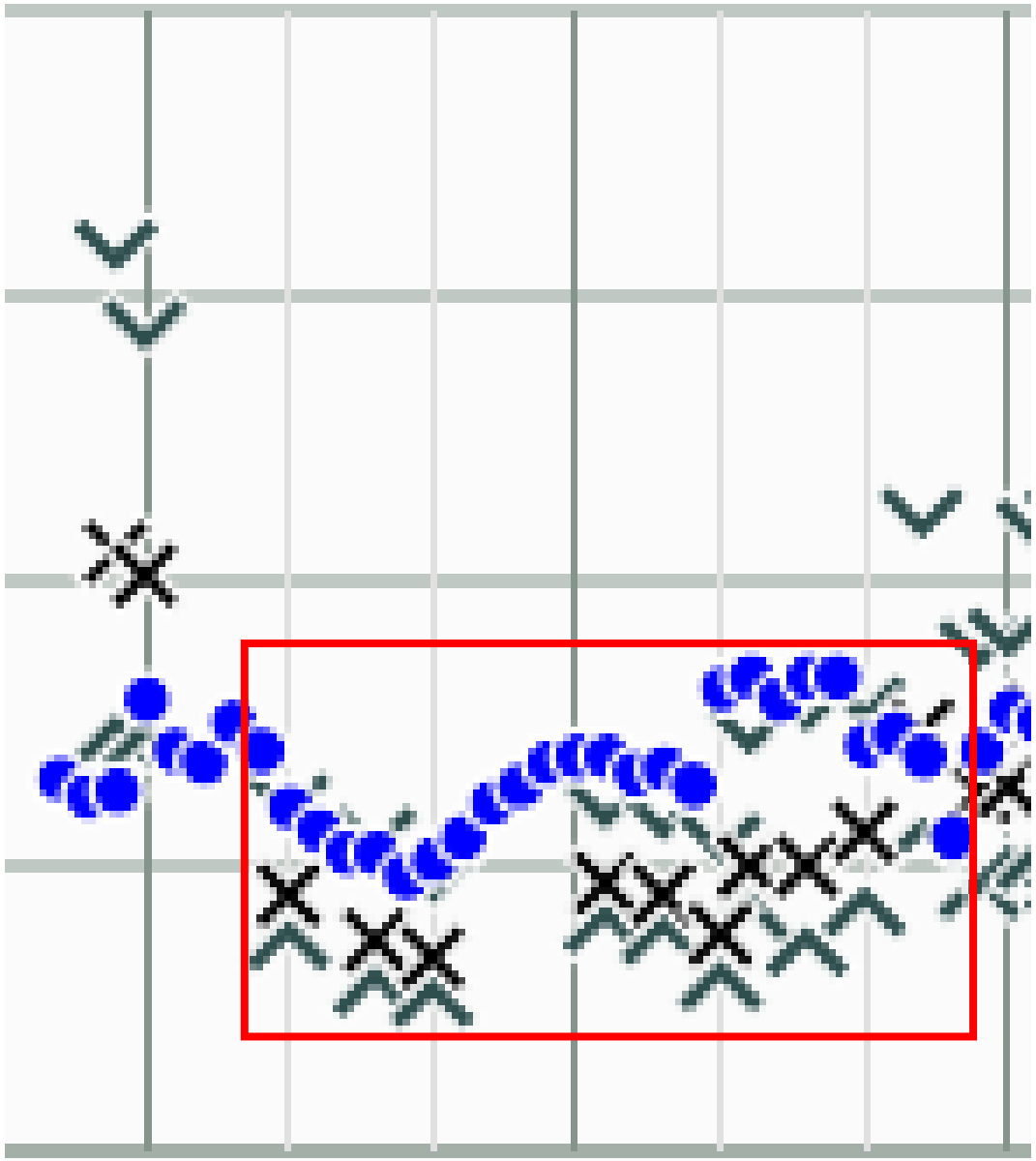
Difficulty with Ventilation

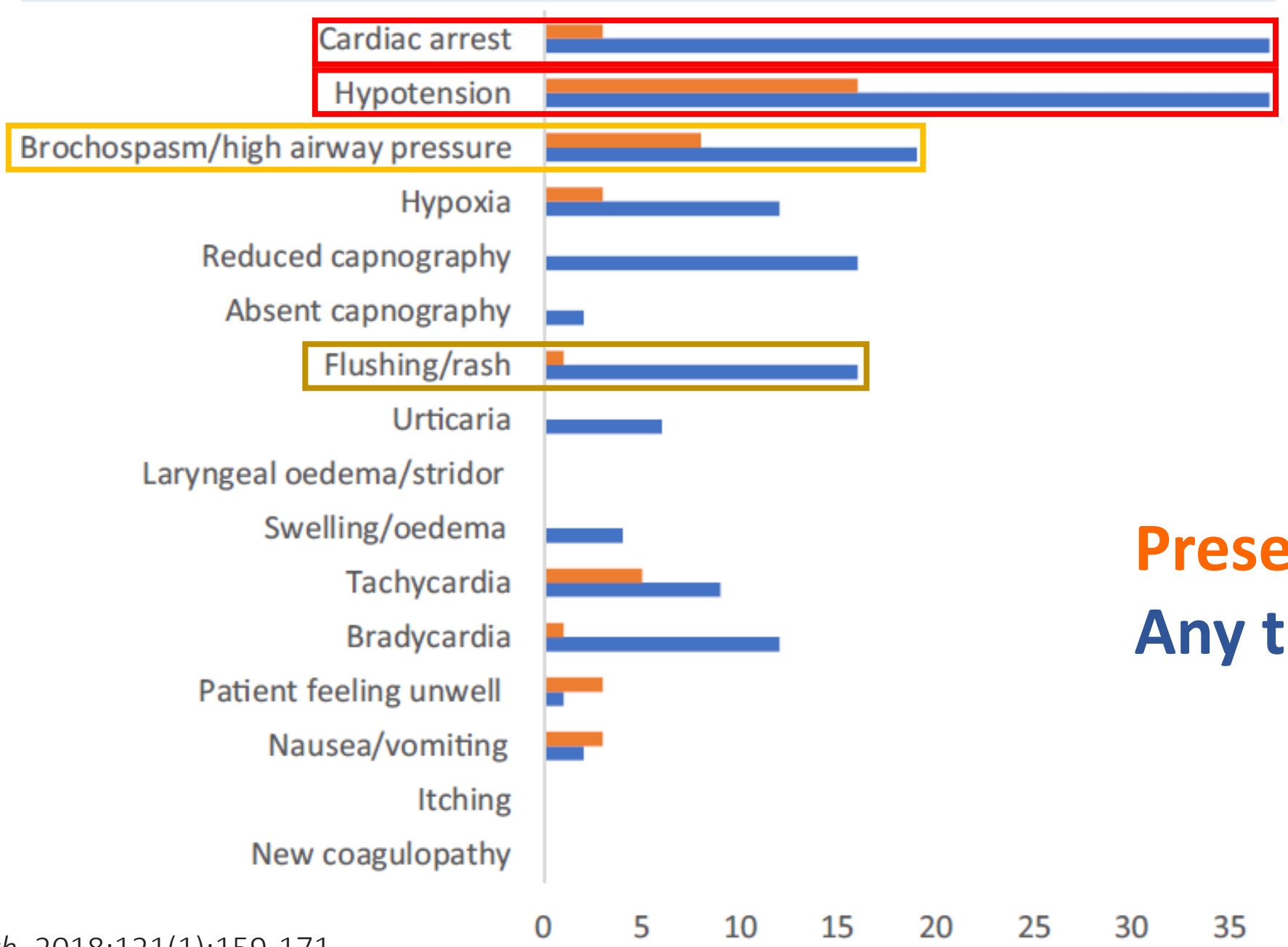
Rash

Inability to Communicate

Stereotypical

Despite Pressors!





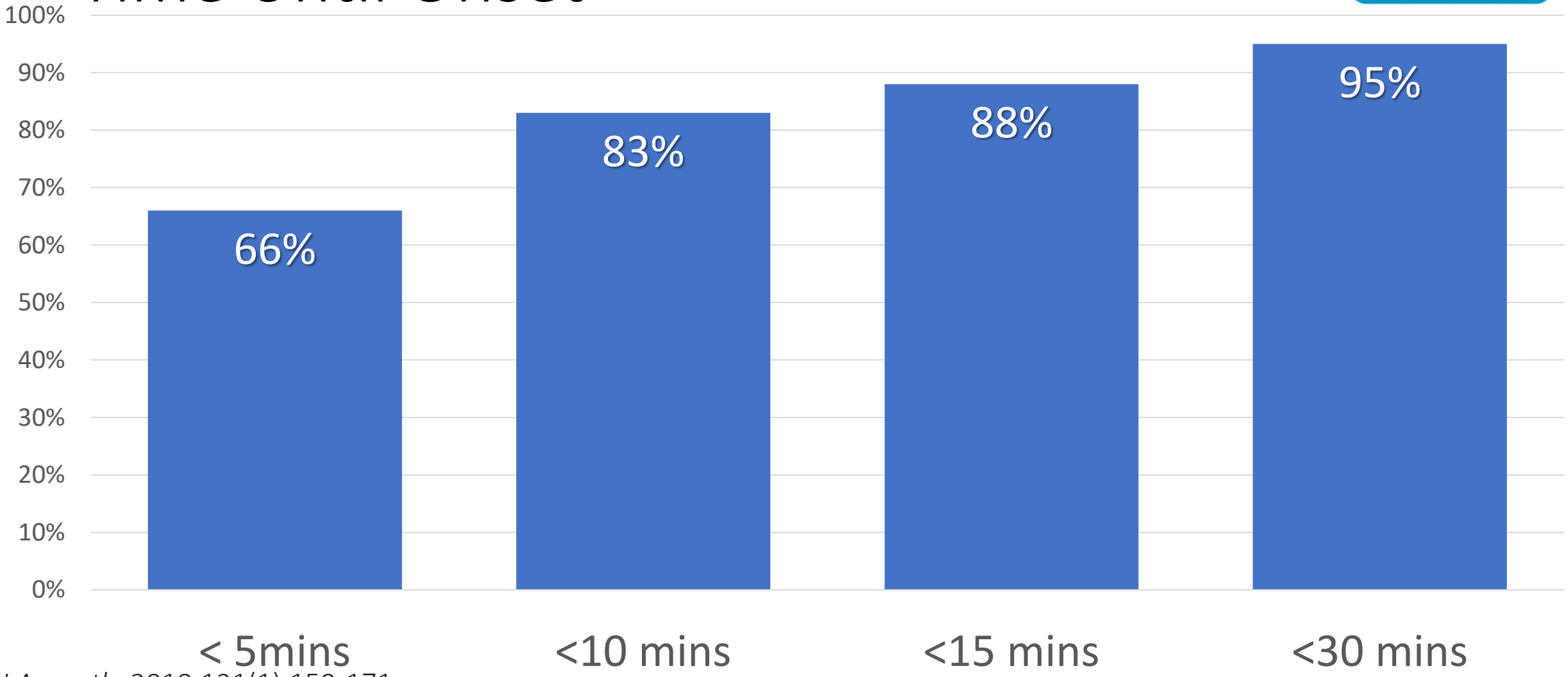
SOCIETY FOR AMBULATORY ANESTHESIA
Outpatient • Office Based • Non-Operating Room
www.SAMBAhq.org

Presenting feature

Any time

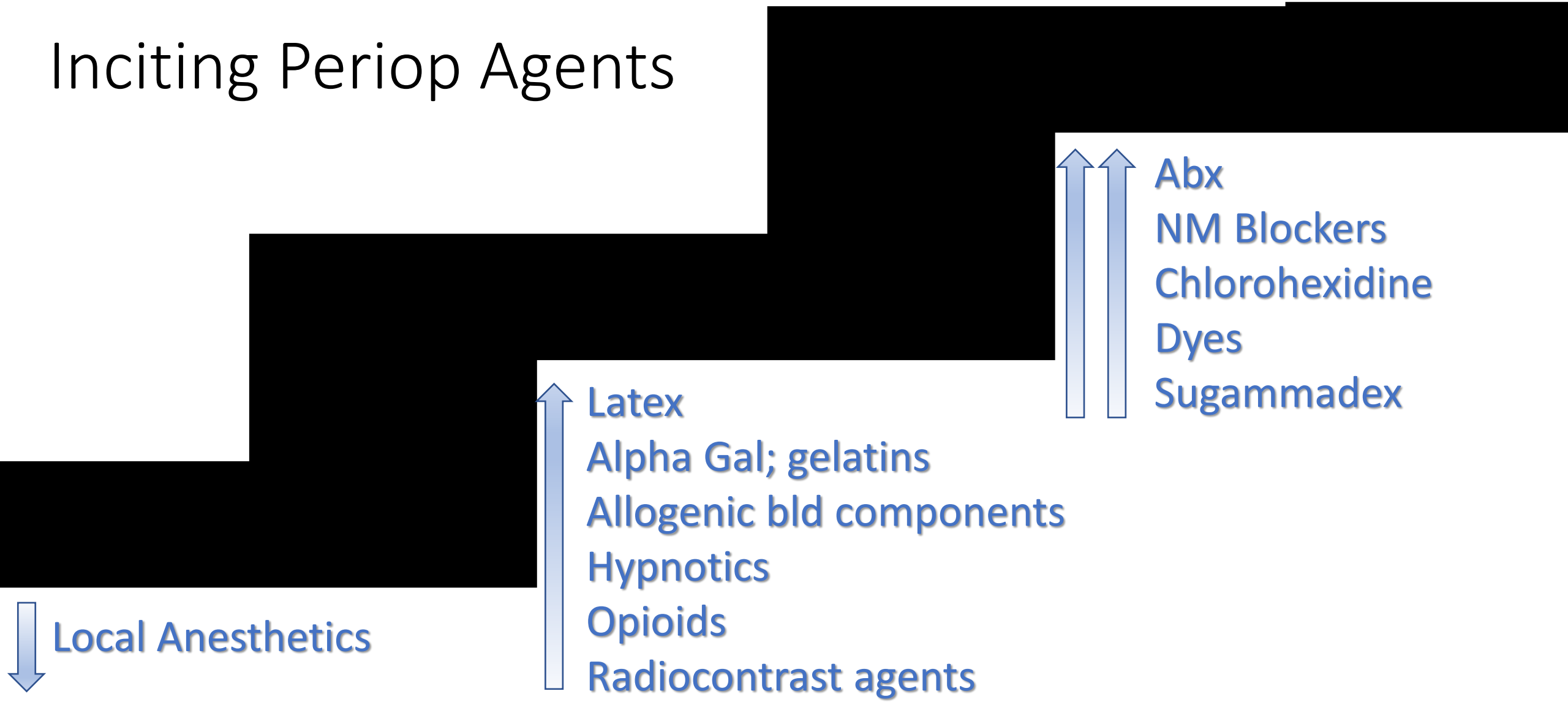
Br J Anaesth. 2018;121(1):159-171.

Time Until Onset



Br J Anaesth. 2018;121(1):159-171.

Inciting Periop Agents



Anesthesiology. 2023;138(1):100-110.

J Allergy Clin Immunol. 2020;145(4):1082-1123.

Treatment: Epi

Fast & most effective

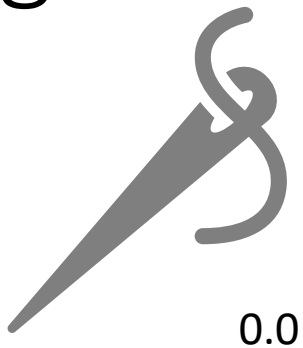
Nonselective adrenergic agonist

Treats symptoms

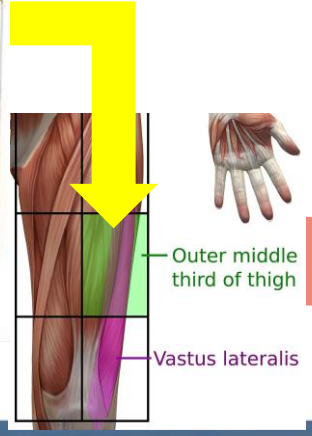
Prevents escalation

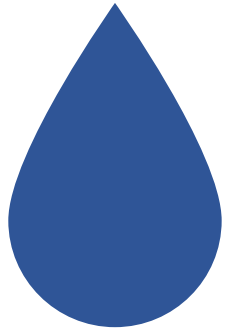
Anesthesiology. 2023;138(1):100-110. *BJA Educ*. 2019;19(10):313-320. *J Allergy Clin Immunol*. 2020;145(4):1082-1123.

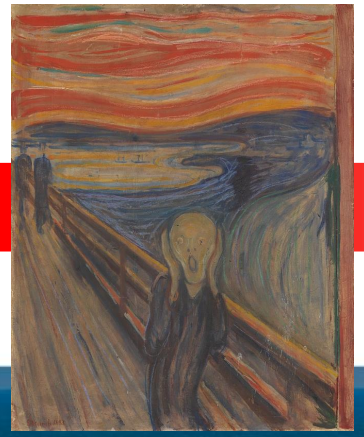
Management



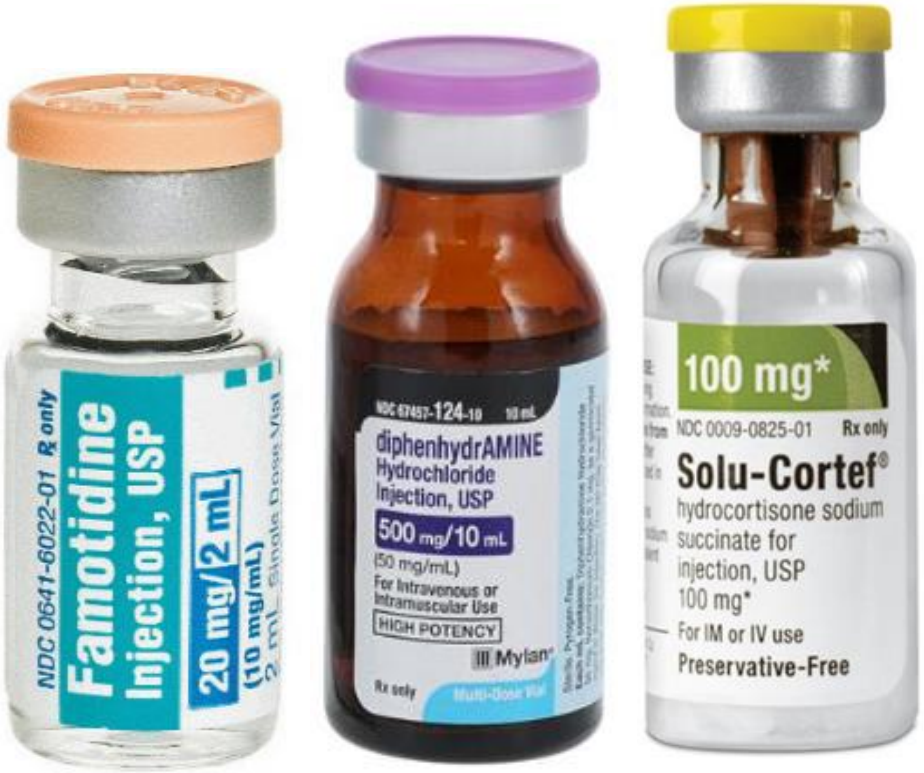
0.01 mg/kg
(0.5 mg adults)





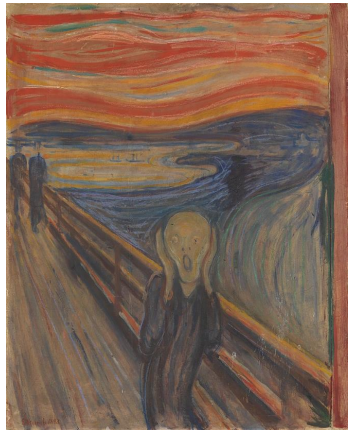


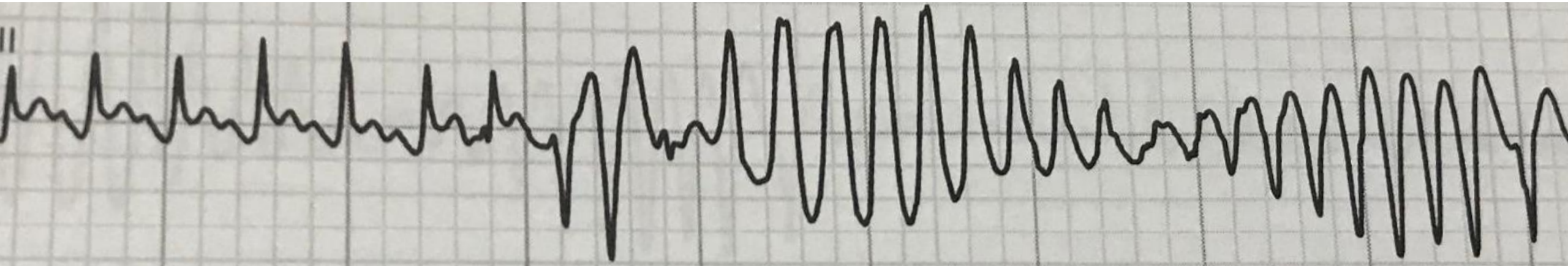
Management?



Anesthesiology. 2023;138(1):100-110. *BJA Educ*. 2019;19(10):313-320. *J Allergy Clin Immunol*. 2020;145(4):1082-1123.

A Real Patient





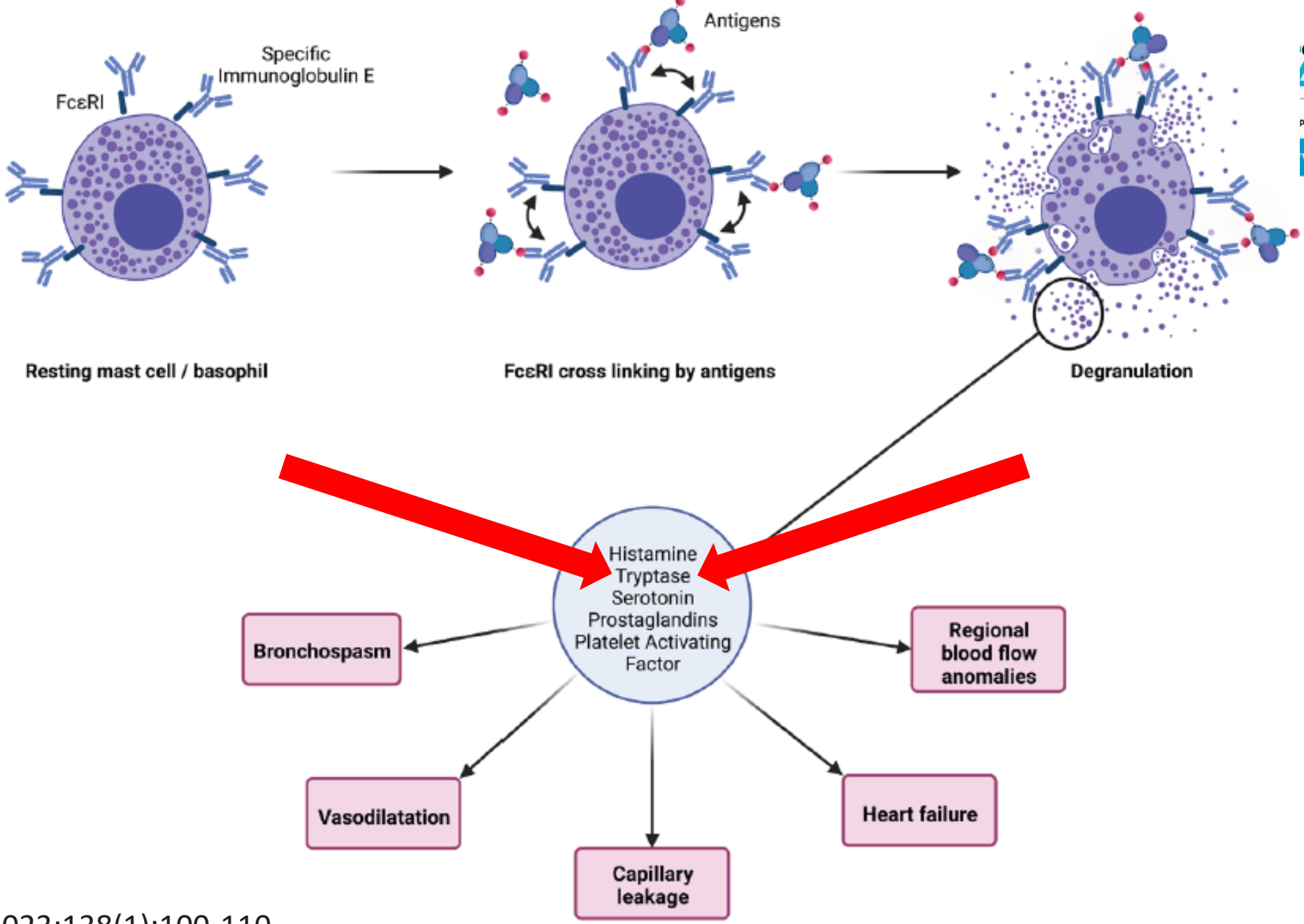
Article of interest:

J Allergy Clin Immunol Pract. 2015;3(1):76-80.

Original Article

Epinephrine in Anaphylaxis: Higher Risk of Cardiovascular Complications and Overdose After Administration of Intravenous Bolus Epinephrine Compared with Intramuscular Epinephrine

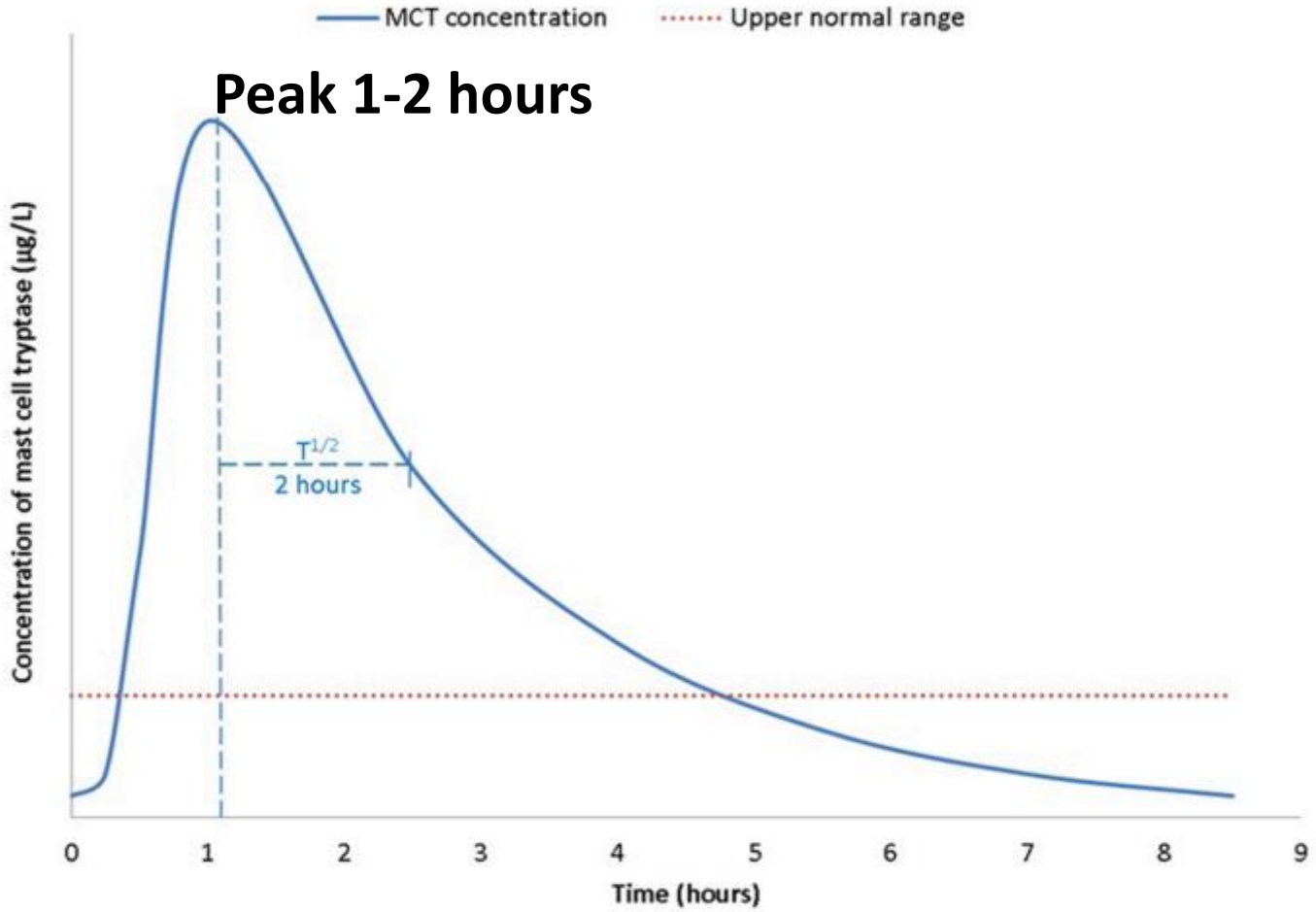
Ronna L. Campbell, MD, PhD, M. Fernanda Bellolio, MD, MS, Benjamin D. Knutson, MD, Venkatesh R. Bellamkonda, MD, Martin G. Fedko, MD, MHA, MBA, David M. Nestler, MD, MS, and Erik P. Hess, MD, MSc *Rochester, Minn*



Anesthesiology. 2023;138(1):100-110.

Tryptase Level

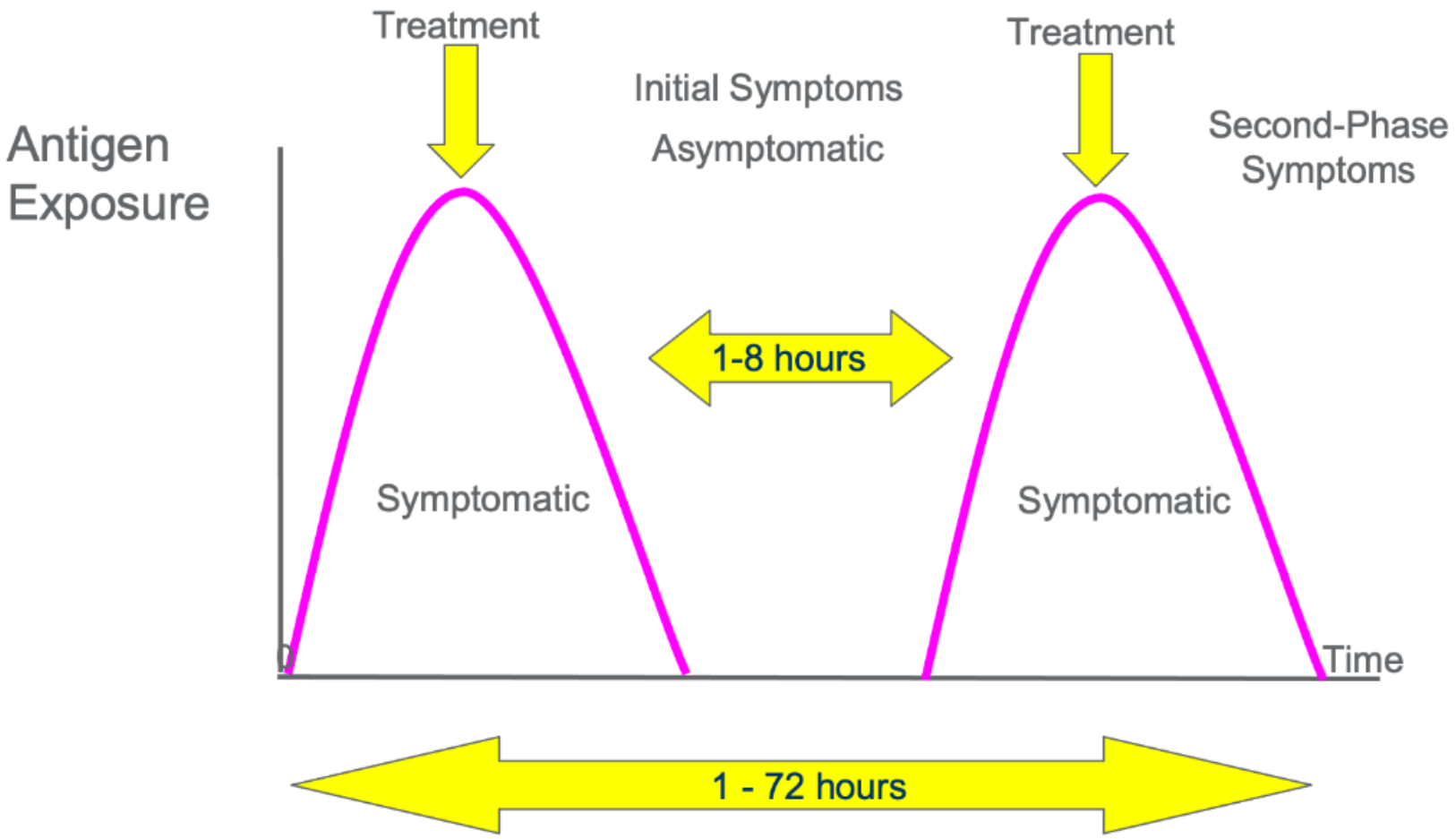
- ✓**93% PPV**
- ✓**17% NPV**



J Allergy Clin Immunol. 2020;145(4):1082-1123.

Front Immunol. 2019;10:494.

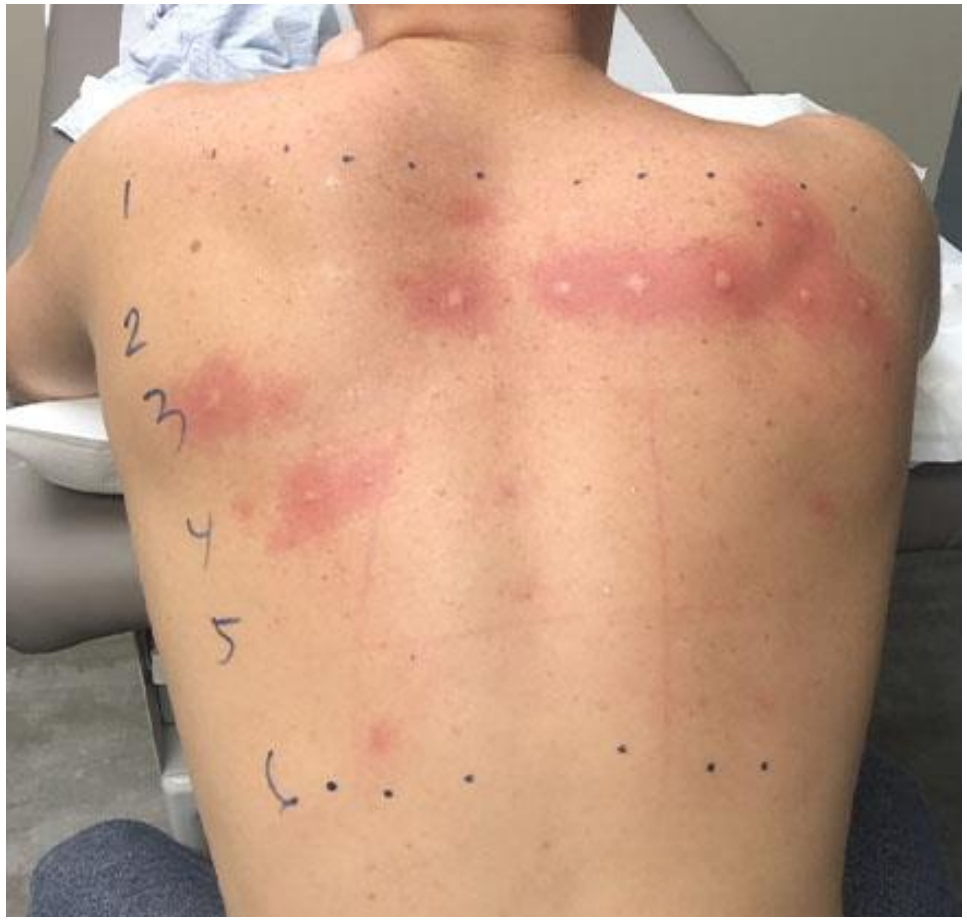
Transfer vs. Discharge



1H PACU?
6H PACU?

https://www.continued.com/respiratory-therapy/articles/anaphylaxis-management-more-than-just-43

For the Future…

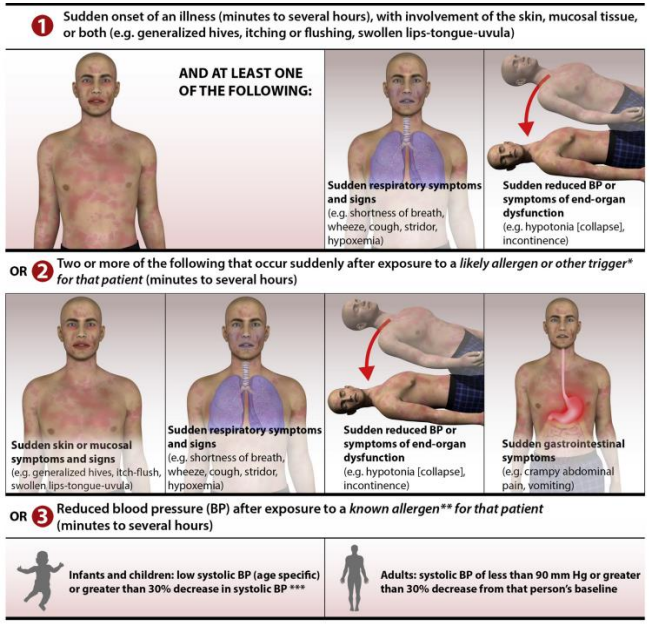


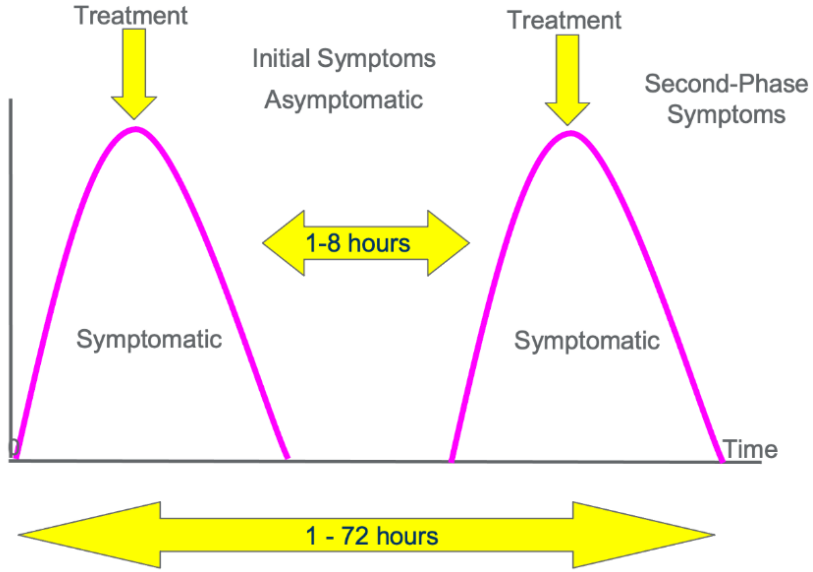
Case Follow-Up

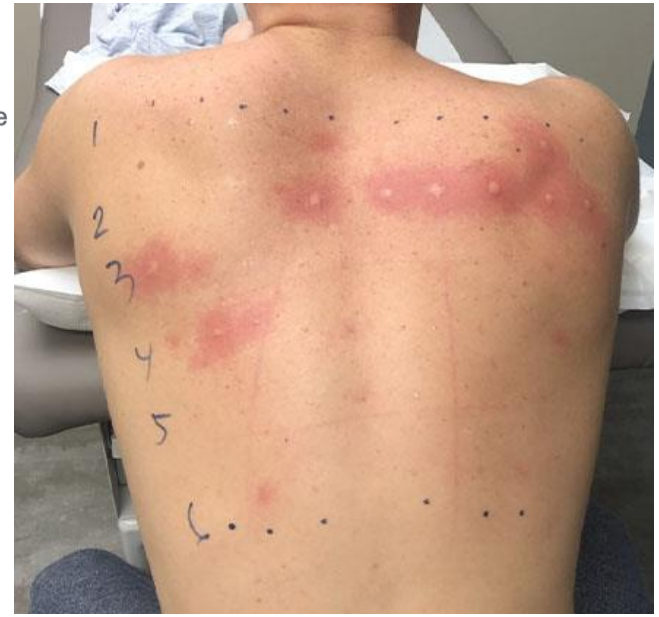
- Pt transferred to OSH intubated/sedated/on epi drip
- Extubated 2 days later
- Discharged 3 days later on prednisone taper
- Tryptase WNL (5.4) (not rechecked at OSH)
- Follow up with Allergist
  - Admitted to developing hives after hot showers: dermatographism/chronic spontaneous urticaria
  - Referred for allergy testing:

  Isosulfan blue allergy supported

Summary







Article of Interest: *A A Case Rep*. 2014;3(1):1-2.

Isosulfan Blue Dye Anaphylaxis Presenting as Impaired Ability to Ventilate via a Laryngeal Mask Airway

Heather Reed, MD,* Christiana Shaw, MD, MS,† Mark Rice, MD,* and Huong Thi Le, MD*