Anaphylaxis is a clinical diagnosis with specific constellation of signs and symptoms.

Anaphylaxis is traditionally understood to have a pathophysiology involving the humoral immunologic system (IgE).

Generally it is agreed that anaphylaxis is an IgE dependent process.

Anaphylactoid reactions are generally considered to be IgE independent.

Idiopathic anaphylactic reactions are those in which the allergen or trigger is not yet recognized.

Immunologic pathophysiology also involves biphasic anaphylactic events.

Alternative proposed pathophysiologic mechanisms.

Mastocytosis and mast cell activation syndrome can present with anaphylactic symptoms.

Idiopathic reactions which are non-IgE mediated but are glucocorticoid responsive.

There are alternative pathways explaining anaphylaxis presentation in humans.

Immunologic phenomenon such as IgG and basophil/mast cell antigen binding.

Immunologic phenomenon can include Platelet Activating Factor (PAF, produced by neutrophils, basophils and possibly by mast cells)

Cytokine participates in anaphylaxis through IL-33 (as mediator vs trigger. Fux, Allergy, 2013).

Bradykinin (BK) can dictate anaphylaxis presentation.

Mast cells participation extends beyond histamine with heparin.

Alternative pathways also explaining anaphylaxis presentation in humanized animal models.

FcγRIV and FcγRIIa receptor activation on neutrophils may participate in pathophysiology of anaphylaxis

Complement activation participates in anaphylaxis (C3a).

Animal models also support clinical studies of PAF activity in anaphylaxis.

Sphingosine-1-phosphate receptor (Cui, JACI, 2013;132:1205)

Potential targets in treating anaphylaxis based on current understanding of pathophysiology

Enzymatic inactivation of PAF

Anti-IL-33

Bradykinin receptor antagonist

S1P2 agonists