

Non-IgE Mediated Allergic Reactions

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Learning Objectives

- To recognise that some patients complaining of 'allergies' have disease that is not IgE-mediated
- To be able to describe some of the clinical features that differentiate IgE and non-IgE mediated 'allergies'
- To be able to recall the features of some non-IgE reactions occurring commonly in clinical practice
- To be able to describe in simple terms some examples of mechanisms of non-IgE mediated 'allergic' reactions

IgE Mediated Allergy

- Time from exposure to symptoms is usually rapid (minutes)
- Small amounts of allergen > large reactions
- Recurs with re-exposure
- IgE can demonstrated by SPT or RAST

IgE Mediated Food Allergy

- Skin (urticaria, angioedema, eczema)
- GI (vomiting, cramps, diarrhoea)
- Resp (wheeze, stridor, nasal Sx)
- CVS (hypotension, collapse)

May look like IgE Mediated Food Allergy but isn't (examples)

- Chronic urticaria/angioedema (may be autoimmune, cholinergic, genetic, idiopathic etc)
- Idiopathic anaphylaxis
- Toxic effect: e.g. sulphites, drugs, schromboid reaction

Non-IgE but Immunological hypersensitivity

- Food induced enteropathy (coeliac disease)
- Allergic eosinophilic gastroenteritis
- Contact dermatitis

Idiosyncratic

e.g. Irritable bowel syndrome,
Chronic fatigue syndrome

Non Immunological Food Intolerance

- Pharmacological (caffeine, nitrites)
- Metabolic (lactase deficiency > milk intolerance)

RN – Allergy Clinic referral from GP

- 50 yrs ♀ Professional musician

PC

- Episodic facial swelling for 3 months



HPC cont/d

- Starts early morning while still in bed
- Associated with itch and erythema
- Lasts between 2 and 3 days
- Only ever R side of face
- Onset coincided with anniversary of mother's death
- Dyspepsia for 4-6 weeks

PMH

- Gastritis 2004
- Globus hystericus 1998
- Hayfever
- Childhood asthma

Other Q?

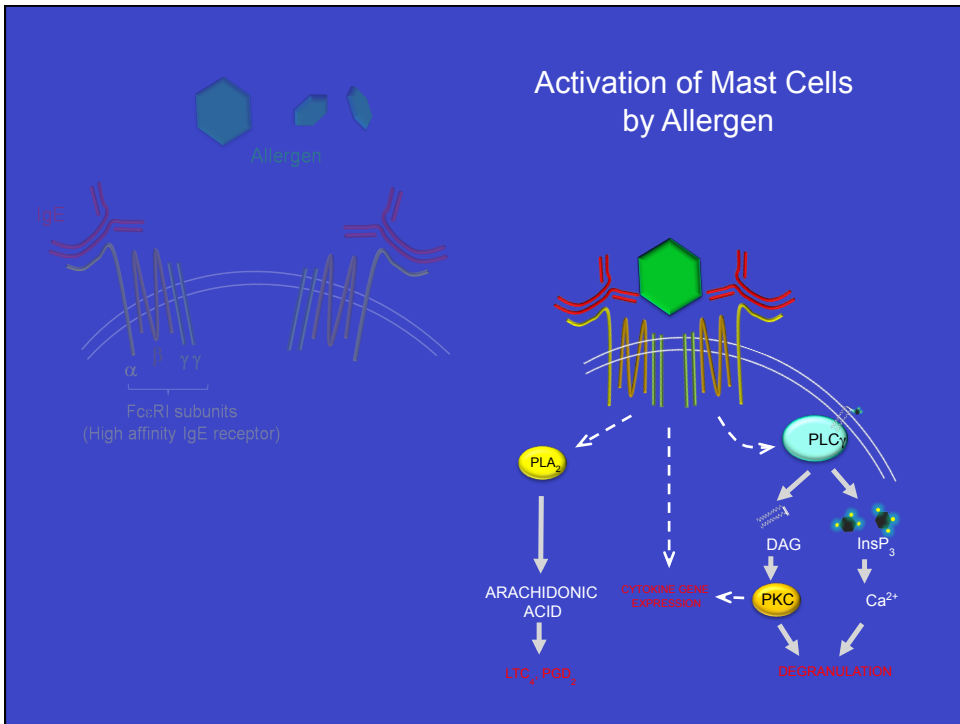
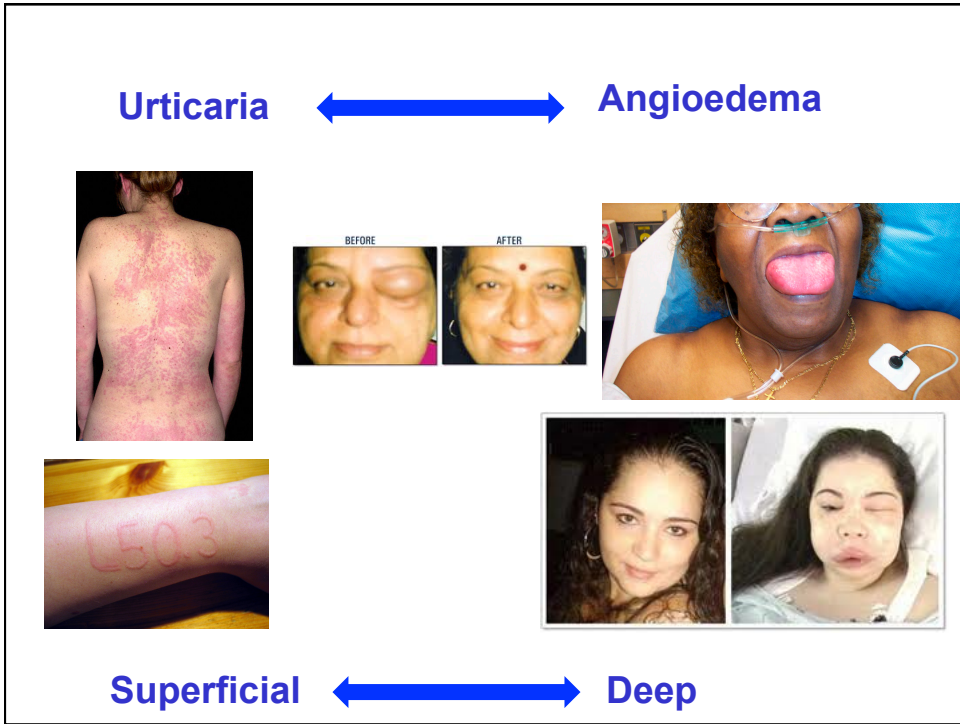
Angioedema

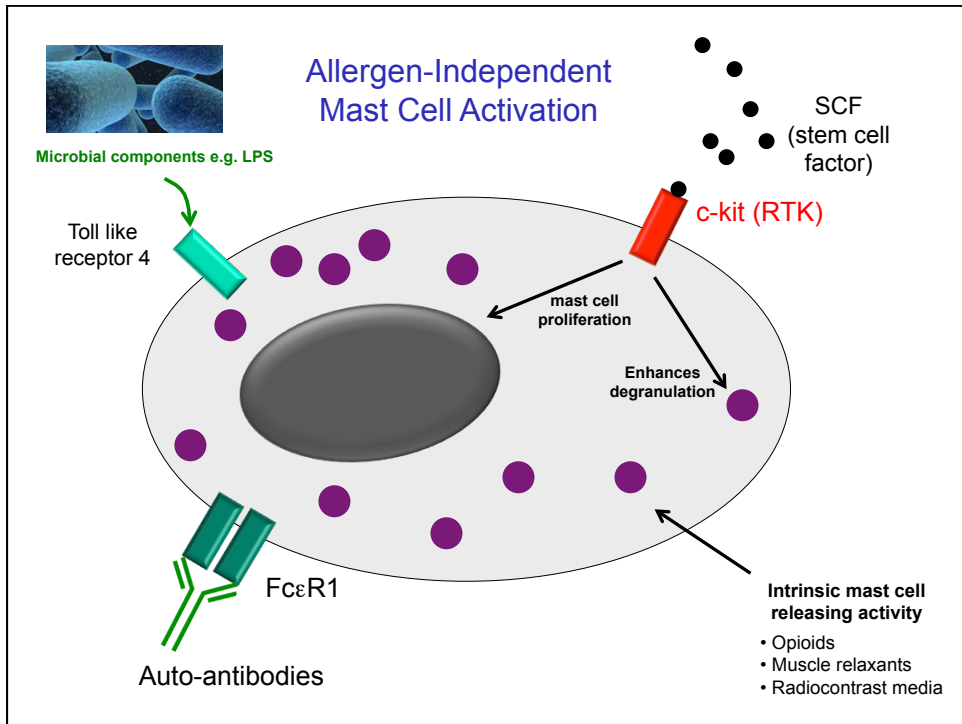
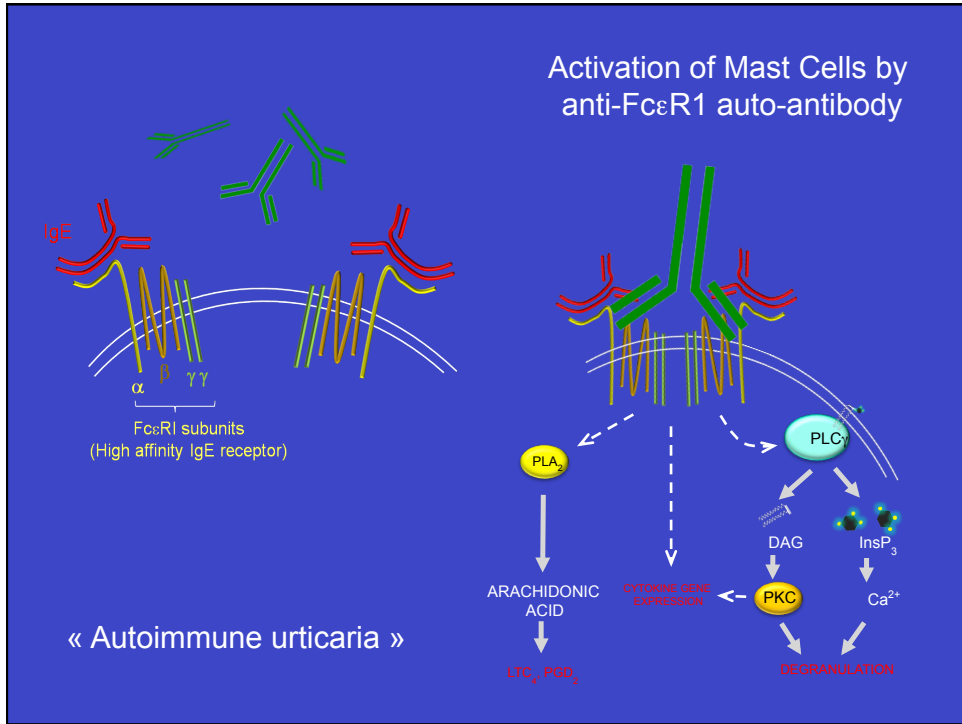
- Lifetime incidence: 10-15% of population
- Painless, well defined areas of oedema
- Due to vascular permeability
- Usually face, lips, mouth (but also any part of body)
- In severe cases: LARYNX > Obstruction > ☠
- Can involve bowel > abdominal pain
- Natural history variable

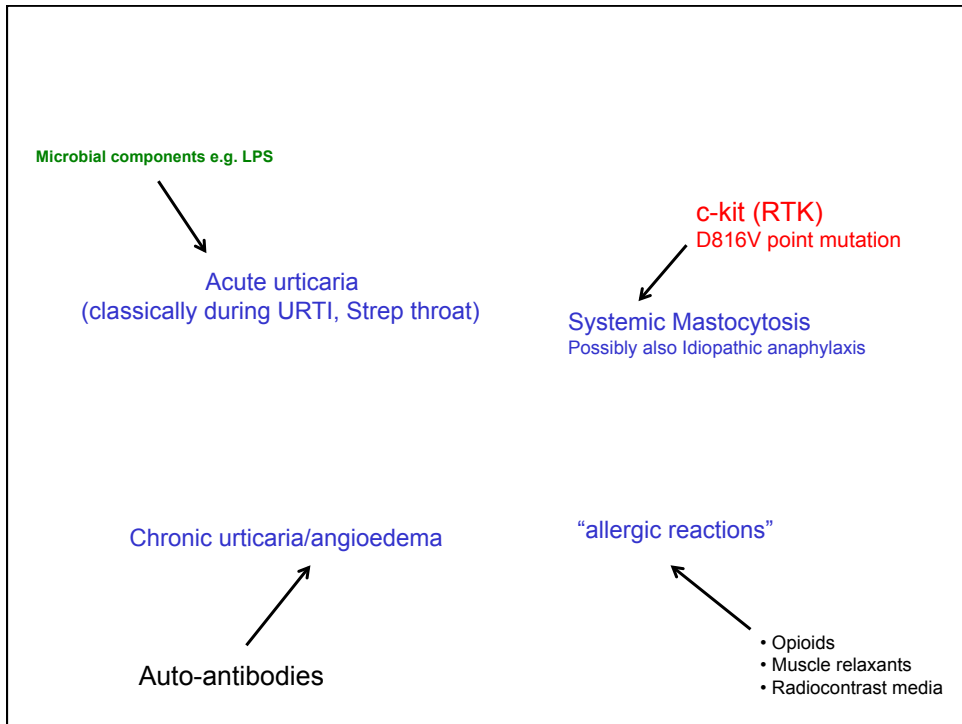
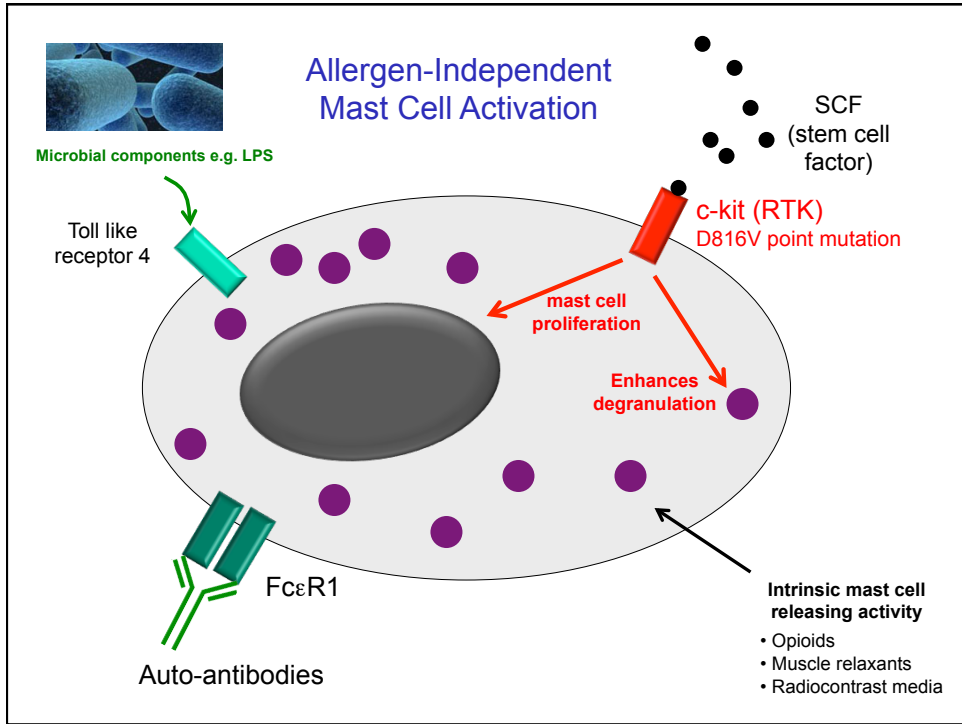
Can be associated with:

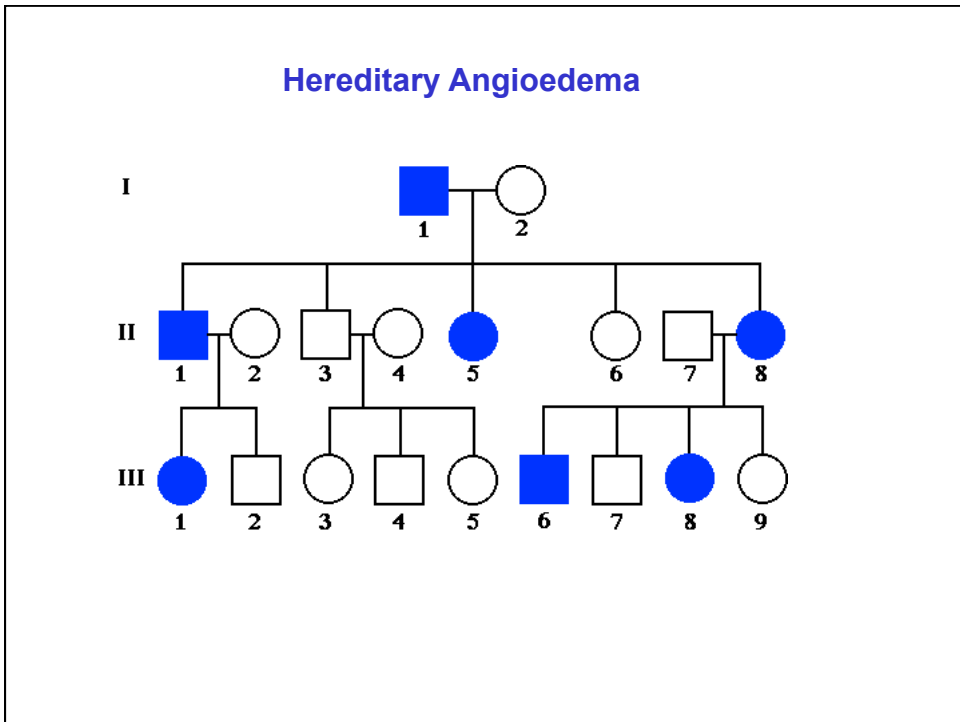
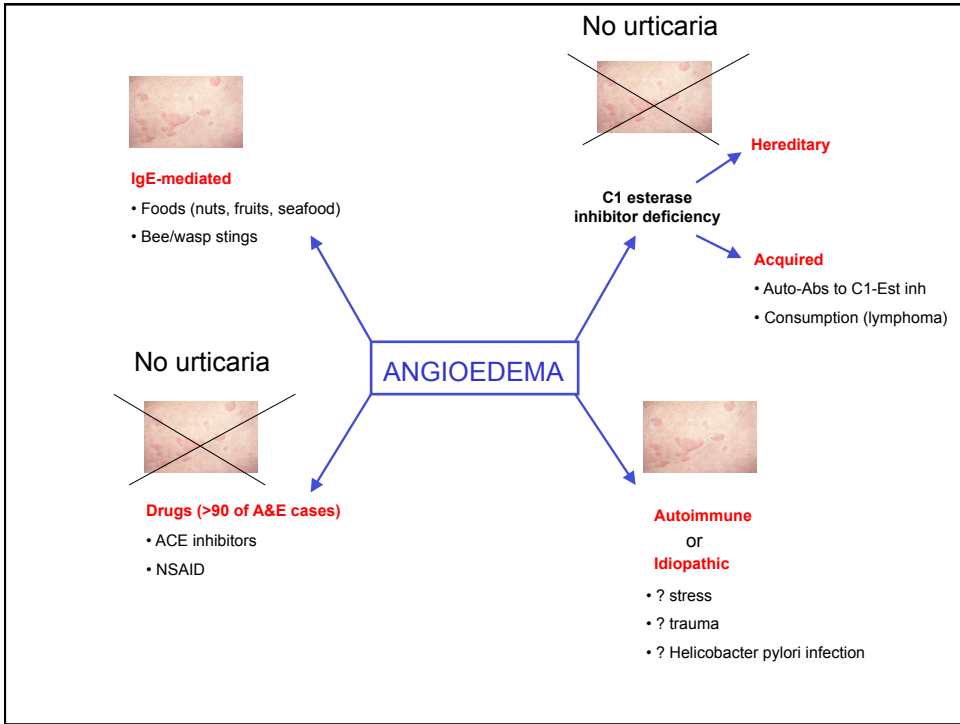



urticaria












Lingual angioedema
in a patient taking
enalapril for 2 years

Alternative drug?


Urticaria ↔ **Angioedema**

Ordinary' urticaria
(? Allergic, autoimmune,
infection, idiopathic)




**Possibly idiopathic
urticaria and angioedema
but consider ACE-I**

BEFORE AFTER




Likely ACE-I




Superficial ↔ **Deep**

Dermographism
(physical urticaria)



Hereditary angioedema



Toxic effect: scombroid reaction



- Poorly preserved oily fish (e.g. tuna)
- Bacterial decarboxylation of histidine
- Histamine content may be increased > 100-fold (fish tastes funny)
- Tachycardia, erythematous flush w/o urtication

Sensitivity to Sulphites (1)

- Anti-oxidant used as preservative
- Sensitivity affects 1:100
- 5% of asthmatics react
- Uncommon in non-atopic non-asthmatics



Sensitivity to Sulphites (2)

Clinical features

- Bronchospasm - “wine sensitive asthma”
- Flushing/feeling of temperature change
- Vomiting
- Difficulty swallowing
- Dizziness
- Contact dermatitis



Sensitivity to Sulphites (3)

Mechanism?

- ? Non-IgE dependent mast cell degranulation
- ? Sulphur dioxide produced in stomach > inhaled > bronchospasm



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