History Taking in Allergic disease

HSJ
29/02/2012
Allergy – what is it?

- Immunological reactions
  - Atopy, IgE-mediated (type 1)
  - Cell mediated, delayed (type 4)
  - Immune complex mediated (type 3)
  - Autoimmune (pseudoallergy)
- Irritant reactions (eg rape)
- Pharmacological/Toxic
- ‘Intolerance’
- Enzymatic deficiency (eg lactose)
- Reaction to physical stimuli (eg gustatory rhinitis)
- Psychological
History Taking

- Detailed account of symptoms, and objective signs
- Use photos if needed
- Time course of attacks
- Exposure to relevant antigens
- Time course of exposure and relation to symptoms
- Decide atopic status
- Background
  - Drugs
  - Social history
  - PMH

Remember – patients are often right, but just as often completely wrong
Nose/Eyes

- Itch
- Sneeze
- Rhinorrhoea
- Congestion
- Loss of smell – (indicative of polyps)
- Post nasal drip
- Sinus pain

- Conjunctivitis – suggests atopy
Key Questions

- Is it seasonal? What season exactly?
- Does it get better away from home?
- Worse with hoovering?
- Pets?
- Indirect contact with animal dander?
- Drugs – oestrogens, vasodilators, NSAIDs
- Have you completely lost your smell?
- Nature of secretions? watery? purulent
- PAR = HDM or pets
Importance of atopy in asthma assessment

- Poorly covered in BTS guidelines
- Much of asthma is non-atopic, esp adults
- Removing pets can cure asthma in some cases
- HDM commonest allergen, avoidance measures of doubtful benefit
- Cockroach important in inner city environment
- Seasonal asthma important, now a major cause of asthma death. Often untreated.
- Fungal sensitisation eg alternaria associated with severe asthma
Skin

- Itch
- Erthema
- Macules/papules
- Weals
- Excoriation
- Vesicles

Distribution
? Palms/soles
GI Tract

- Oral itch/swelling (angioedema)
- Angioedema of oesophagus
- Vomiting/diarrhoea common in food allergy
- Intolerance symptoms notably bloating, diarrhoea, constipation
Anaphylaxis - symptoms

- Erythema
- Pruritus
- Urticaria
- Angiooedema - face, eyes, lips, tongue, throat
- Hypotension
- Collapse, LOC
- Vomiting, abdo pain, diarrhoea
- Rhinoconjunctivitis
Allergen exposures - timing

- Sensitization is necessary for an IgE response
- Can occur after one exposure or over years
- Allergy should be repeatable
- Food allergy should occur minutes-seconds
- Many inhaled allergens act through late phase reaction
- Contact sensitivity is delayed ie 24 hours
- Drug allergy does not have to be first dose, or even during a course of Rx. Drug allergy can take weeks/months to settle
Allergen exposures - timing

• Pet allergens can persist for several months after removal
• Think of key seasons
  – Spring
  – Summer
  – Autumn
  – Winter

? Which
<table>
<thead>
<tr>
<th>Season</th>
<th>Grass Pollens</th>
<th>Tree Pollens</th>
<th>Weed Pollens</th>
<th>Fungal Spores</th>
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<tbody>
<tr>
<td>April</td>
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<tr>
<td>August</td>
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<td>Birch, plane</td>
<td>Nettle, dock</td>
<td>Cladosporium</td>
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<td>Ash, pine</td>
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<td>alternaria</td>
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<tr>
<td></td>
<td>meadow,</td>
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<td></td>
<td>dog's tail,</td>
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<td>fescue, etc</td>
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</tbody>
</table>
Allergens - inhaled

- House dust mite, storage mites
- Cockroach
- Cat, Dog, hamster, guinea pig etc
- Bird feathers
- Horse
- Rat, Mouse
- Pollens – grass, tree, weed
- Spores – aspergillus, alternaria, cladosporium
Allergens - food

- Peanuts
- Tree nuts – hazel, brazil etc
- Legumes – beans, peas, lentils
- Seafood – fish, crustacea, molluscs
- Soy, sesame,
- Fruits – grape, apple, peach (Oral allergy syndrome)
  - Egg,
  - Wheat
  - Milk
  - Meats, vegetables, spices
Allergens - food

Key issues/questions

• Timecourse of reaction
• Repeatability
• Shared epitopes/families
  – Tree pollen/fruit
  – Latex/banana, kiwi
• Sensitization to foods can occur at any age
• Unusual if not atopic
• Patients often blame chronic urticaria on food
• Intolerance - complex
Risk factors for fatal reaction in peanut allergy

- Previous life-threatening reaction
- Asthma
- Reaction to trace quantities
- Offer Epi-pen to all who have had life-threatening features or reactions to trace
Allergens - other

- Latex (HCW, spina bifida)
- Venom – wasp, bee (older, non-atopic)
- Drugs
  - Antibiotics
  - NSAIDs
  - Opiates
  - ACE inhibitors
  - And many more
- Contrast media
- Anaesthetic drugs
- Other biological products
Anaphylaxis with anaesthesia

- Muscle relaxants
- Opioids
- NSAIDs
- Propofol
- Antibiotics
- Colloid
- Local anaesthetics
- Reactions immediate and systemic
- Need to review charts in detail
- Intradermal and Challenge testing required
Venom

- Typically older patients, non-atopic
- Esp beekeepers, gardeners, farmers
- Sensitization occurs as a result of multiple previous stings
- Key question – signs of systemic rather than local reactions
- Those with systemic reaction at risk of death with re-sting so should be offered desensitization
Angioedema

Isolated, may not be classed as anaphylaxis

Causes:

- Idiopathic - associated with urticaria
- ACE inhibitors, NSAIDs, statins
- C1 esterase inhibitor deficiency (congenital, acquired)
Urticaria

Acute
• Allergy eg food, penicillin, venom
• Anaphylactoid eg NSAIDs

Chronic
• Chronic idiopathic urticaria
• Urticarial vasculitis
• Physical urticaria - cold, pressure, cholinergic, dermatographism
Chronic idiopathic urticaria

- Autoimmune disease
- Associated with thyroid disease
- 40% have IgG against alpha subunit of IgE receptor
- Often coexists with angiooedema
- Resolves spontaneously over months/years
- Rx antihistamines/ LTRA/ ciclosporin
Drug History

- Current prescribed regular meds
- Current prescribed prn meds
- Recent/past courses antibiotics, steroids, NSAIDs etc
- OTC medications
- Herbal/complimentary products
- Compliance
- Effective delivery
Drug History

Common presentations:
- ACE inhibitors and angioedema, esp tongue
- Inpatients on IV antibiotics
- Anaesthesia
- NSAIDs commonly cause allergy, any site

Always think drugs

Enormous variety of mechanisms in drug hypersensitivity, Type 4 commoner than type 1
Social History

Housing

• Dust, carpets, ventilation
• Damp and mould
• Old or new property
• Presence of pets/birds
Social History

Smoking

- Active/passive
- Smoking enhances allergen sensitization
- Smoking causes exacerbation of asthma/rhinitis
Social History

Occupation

- Asthma
- Rhinitis
- Dermatitis

- All can be occupational due to a variety of mechanisms
  - IgE mediated
  - Delayed hypersensitivity
  - Irritant reactions
Past Medical History

 Anything can be relevant here. Consider:

• Prior atopy
• Prior autoimmune disease especially thyroid
• Cardiac disease/beta blockers
• Surgery
Family history

- Atopic conditions, asthma, food allergy
- Autoimmune disease, esp thyroid

Remember:
- Atopy and asthma (BHR) are related but different
- Both run strongly in families
- Maternal asthma is strong risk factor
- 2 atopic parents – high risk