Factors Associated with Self-Reported Multiple Drug Allergies in a Large Chronic Urticaria Cohort

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Abstract

Rationale: While drug allergy can trigger urticaria, the true incidence of drug allergies in chronic idiopathic urticaria (CIU) is unknown. Drug allergy in the general population is estimated at 5%-25%. We aimed to characterize self-reported drug allergies in a cohort of CIU patients.

Methods: 362 adult CIU patients seen at the University of Pittsburgh Allergy Clinic from 2007-2017 were identified. Multiple drug allergies (MDA) were defined as allergy to ≥2 chemically unrelated drugs. We compared demographic features of MDA, single drug allergy (SDA) and no drug allergy (NDA) using a Chi-square or Wilcoxon analysis.

Results: Overall, 362 CIU patients (56%) reported any drug allergy. Of these, 57% (n=115) reported MDA. Compared to SDA and NDA, MDA associated with Caucasian race and female gender (p=0.026, p=0.006, respectively). MDA and SDA associated with older age of CIU onset, female gender, Caucasian race, higher BMI, asthma, and antibiotic allergies. This population reported asthma vs. SDA and NDA (39%, 15%, 23%, p=0.0002, respectively). Compared to SDA, MDA reported a higher rate of penicillin, cephalosporin, sulfa, non-steroidal anti-inflammatory drugs, opiate and radiocontrast allergy (all p<0.025).

Conclusions:
- CIU patients have a significantly higher prevalence of drug allergies vs. the general population (56% vs. 5%-25%)
- Asthma was reported in 29% of our drug allergic CIU patients
- MDA CIU patients had the highest asthma prevalence (39%)
- This is higher than the reported asthma rates in our region and 2 other CIU studies
- Penicillin was the most common drug allergy (n=66, 18% total cohort, 33% of drug allergic CIU patients)
- Similar to other studies, 68% of patients with penicillin allergy reported additional drug allergies

Discussion

- CIU pts are more likely to report a drug allergy and have a higher incidence of comorbid asthma
- Actual prevalence of drug allergy difficult to determine as:
  - Self-reported drug allergy
  - Cessation of antihistamines for skin testing and challenge in the CIU population is difficult
- VCD has been associated with a misdiagnosis of asthma and a higher prevalence of drug allergy (vs. asthma and controls)ø
- VCD was not assessed in this cohort
- Biologics and asthma drug allergy should be considered in CIU
- Physicians who care for CIU pts need to take detailed drug allergy and asthma histories

References


Hypothesis

- Patients with CIU would have a higher prevalence of reported drug allergies than the general population.

Methods

- Retrospective chart review of adult patients ≥18 years seen in the University of Pittsburgh Allergy and Immunology Clinic from 2007 to 2017
- Diagnosis of chronic urticaria with or without angioedema (n=362)
- Characteristics evaluated: drug allergies and associated demographic and comorbid features
- Sub-analysis of CIU patients with single (SDA), multiple (MDA), and no drug allergy (NDA)
- Data was analyzed with JMP Pro (Version 14.1.0, SAS Institute Inc., Cary, NC, 1989-2019)

Results

- 56% of CIU pts reported Drug Allergy
- MDA in 57% of drug allergic CIU pts

Figure 1: Patient reported drug Allergy
Figure 2: Patient reported SDA, MDA or NDA

PCN Allergy: 18% of CIU; 68% of PCN allergy had MDA

PCN allergy

No PCN allergy

MDA

SDA

NDA

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