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Characteristics of IFA Allergy

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Disclaimers

- The views expressed are those of the presenters and do not reflect the official views or policy of the Department of Defense or its Components.
- The voluntary, fully informed consent of the subjects used in this research was obtained as required by 32 CFR 219 and DODI 3216.02_AFI40-402.

Disclosures

- None

Objective of Study

- This study sought to characterize the initial presentation of hymenoptera venom allergic (HVA) patients
- Examine differences between patients with imported fire ant (IFA) and flying hymenoptera (FH) reactions

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Methods

- Multi-year, observational, single-institution analysis of patients referred for evaluation of HVA
- Data obtained via physician interview and chart review
 - Baseline characteristics
 - Comorbid conditions
 - Medications
 - Culprit stinging insect
 - Reaction severity
 - Emergency department (ED) interventions
 - Specific IgE results

Methods (continued)

- Statistical Analysis
 - Categorical data analyzed using Chi-Squared tests
 - Means and standard deviations were analyzed using Student's t-test/ANOVA with a Tukey adjustment or Wilcoxon's Test

Results

TABLE I: Baseline characteristics of participants

	Total (n = 175)	FH (n = 38)	IFA (n = 124)	Both (n = 13)	P value
Male	77 (44)	16 (42)	55 (44)	6 (46)	P=0.96*
Age (y)					
Mean	28±14	31±14	27±14	39±16	FH vs IFA: P=0.14 Both vs IFA: P=0.01 Both vs FH: P=0.24
Range	2 - 75	6 - 63	2 - 75	11 - 64	
Age<17y	34 (19)	6 (16)	27 (22)	1 (8)	
Asthma	36 (21)	7 (18)	26 (21)	3 (23)	P=0.92*
Reaction Severity					
Grade A	9 (5)	3 (8)	6 (5)	0	
Grade B	26 (15)	4 (11)	22 (18)	0	
Grade C	114 (65)	27 (71)	78 (63)	9 (69)	P=0.26**
Grade D	24 (14)	3 (8)	17 (14)	4 (31)	
Grade E	1 (1)	0	1 (1)	0	

Values are n (%) or mean ± SD

FH, flying hymenoptera; IFA, imported fire ant; Both, reaction to FH & IFA

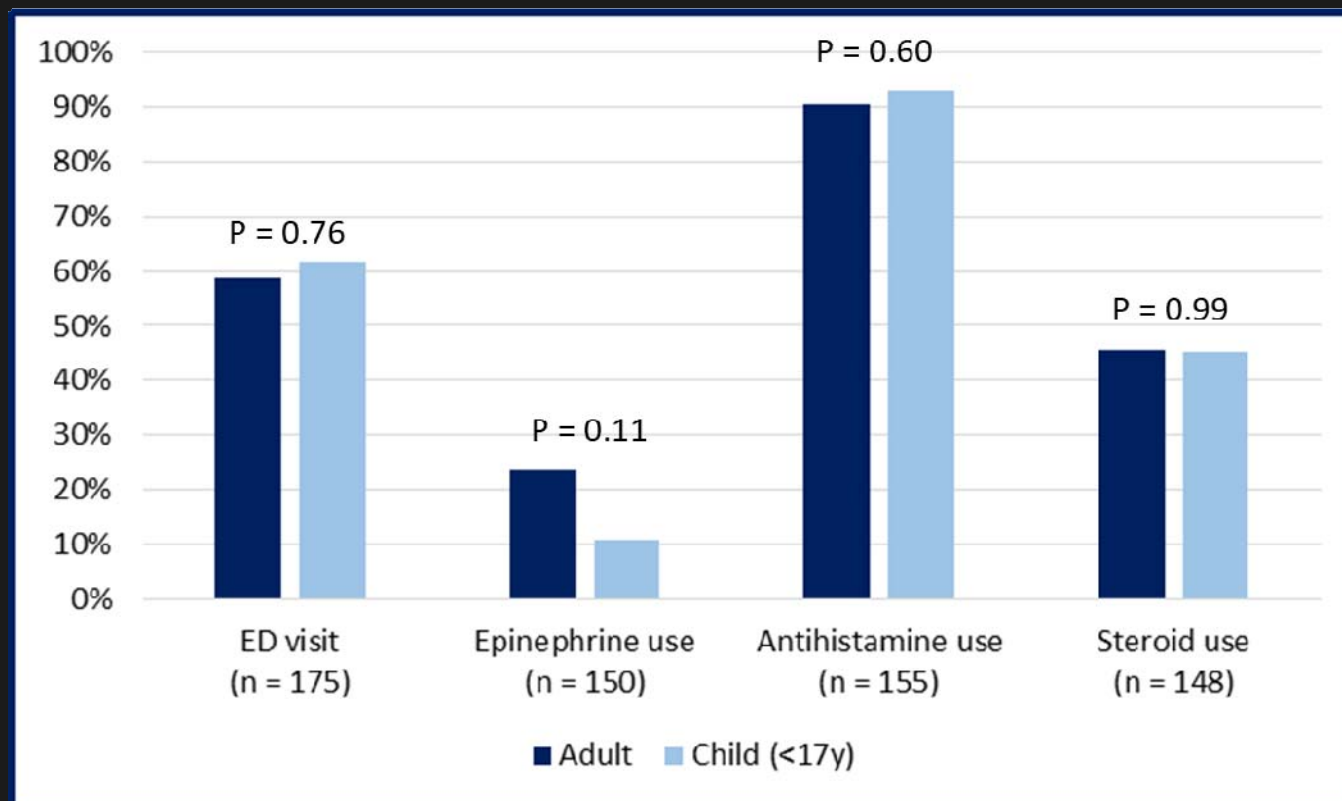
Grade A, large local rxn; Grade B, systemic cutaneous reaction; Grade C, cutaneous + other system; Grade D, hypotension or hypoxia; Grade E, serum sickness-like reaction

*P values comparing IFA, FH and both

**No statistical significance for reaction severity across all groups

Results

FIGURE I: Age analysis of emergency care



Conclusions

- IFA and FH patients have many, now confirmed, similarities
- Asthma prevalence 2.6 times more frequent in HVA patients compared to the general population
- Severity of reactions correlated with ED visits, use of epinephrine and corticosteroids independent of age
- Only 37% of patients who met diagnostic criteria for anaphylaxis received appropriate treatment with epinephrine in the ED
- Children were almost 50% less likely to receive epinephrine in the ED when compared to adults
- Majority of patients who were seen in the ED had their venom allergy confirmed and went on to initiate life-saving immunotherapy

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