



POSTER PRESENTATION

Open Access

# Treatment of initial allergic reactions to peanut inside and outside of health care facilities

L Soller<sup>1\*</sup>, M Ben-Shoshan<sup>2</sup>, J Fragapane<sup>1</sup>, L Joseph<sup>1,3</sup>, Y St Pierre<sup>1</sup>, L Harada<sup>4</sup>, C Fortin<sup>5</sup>, M Allen<sup>6</sup>, AE Clarke<sup>1,7</sup>

From Canadian Society of Allergy and Clinical Immunology Annual Scientific Meeting 2009  
Halifax, Canada. 22-25 October 2009

## Background

Recent studies suggest increased admission rates for food-related anaphylaxis. The only effective treatment for anaphylaxis is prompt administration of epinephrine.

## Objectives

To characterize treatment practices of initial allergic reactions inside and outside health care facilities (HCF).

## Methods

Individuals with an allergist-confirmed peanut allergy were recruited from the Montreal's Children Hospital and Canadian food allergy advocacy organizations. Data were collected on initial allergic reactions to peanut and treatment inside and outside HCFs.

## Results

Of 751 individuals who had an allergic reaction to peanut, 613 responded (81.6%). Initial reactions were mild in 28.4% (95% CI, 25.0-32.1%), moderate in 50.6% (46.6-54.6%), and severe in 20.9% (17.8-24.3%). Average age of initial reaction was 2.1 years (2.0-2.3). Among participants, 11.6% (9.1-14.7%) were diagnosed with peanut allergy (based on skin and IgE testing) prior to the initial reaction. Of the 613 participants, 32.1% (28.5-36.0%) were treated in HCFs only, 51.7% (47.7-55.7) outside HCFs only, and 16.2% (13.4-19.3%) in both. 21.3% (17.0-26.3%) of all reactions treated in HCFs received epinephrine (table) versus only 3% (1.8-5.1%) treated outside. Of those with moderate or severe initial reactions, 58.2% (53.5-62.8%) were treated in HCFs, and 23.9% (19.1-29.6%) of these received epinephrine. See table 1.

**Table 1**

	% of Respondents Receiving each Treatment in HCF			% of Respondents Receiving each Treatment outside HCF		
	Epinephrine +/- other medications% (95% CI)	Other medications (excluding epinephrine)	None	Epinephrine +/- other medications	Other medications (excluding epinephrine)	None
<b>All reactions</b>	<b>21.3</b> (17.0-26.3)	<b>50.7</b> (45.0-56.4)	<b>28.0</b> (23.2-33.5)	<b>3.0</b> (1.8-5.1)	<b>47.2</b> (42.6-51.8)	<b>49.8</b> (45.2-54.4)
<b>Severity</b>						
Mild	<b>4.9</b> (1.5-16.2)	<b>39.0</b> (25.6-54.4)	<b>56.1</b> (40.1-70.2)	<b>0.0</b> (0.0-2.6)	<b>50.4</b> (41.1-58.5)	<b>49.6</b> (41.5-57.8)
Moderate	<b>15.1</b> (10.4-21.5)	<b>54.1</b> (46.3-61.7)	<b>30.8</b> (24.1-38.4)	<b>4.3</b> (2.3-7.8)	<b>46.8</b> (40.4-53.2)	<b>48.9</b> (42.5-55.4)
Severe	<b>38.5</b> (29.4-48.6)	<b>50.0</b> (40.1-59.9)	<b>11.5</b> (6.5-19.4)	<b>4.5</b> (1.8-11.2)	<b>43.2</b> (33.3-53.7)	<b>52.3</b> (41.9-62.5)
<b>Peanut allergy diagnosed prior to reaction</b>						
Yes	<b>17.2</b> (7.7-34.8)	<b>48.3</b> (31.3-65.7)	<b>34.5</b> (20.0-52.9)	<b>6.5</b> (2.3-17.6)	<b>67.4</b> (52.8-79.2)	<b>26.1</b> (15.6-40.4)
No	<b>20.9</b> (16.0-26.8)	<b>53.6</b> (47.0-60.2)	<b>25.5</b> (20.1-31.6)	<b>2.7</b> (1.4-5.0)	<b>44.7</b> (39.4-50.0)	<b>52.6</b> (47.3-58.0)

<sup>1</sup>Division of Clinical Epidemiology, Department of Medicine, McGill University Health Center, Canada

## Conclusion

Almost 50% of individuals with potentially life-threatening initial reactions are not treated in HCFs. Further, for those with moderate and severe reactions treated in HCFs, there is substantial underuse of epinephrine. Thus, it is crucial to establish, distribute, and monitor treatment guidelines that would improve treatment practices of food-related allergic reactions.

## Author details

<sup>1</sup>Division of Clinical Epidemiology, Department of Medicine, McGill University Health Center, Canada . <sup>2</sup>Division of Pediatric Allergy and Clinical Immunology, Department of Pediatrics, McGill University Health Center, Montreal, Quebec, Canada . <sup>3</sup>Departments of Epidemiology and Biostatistics, McGill University, Canada . <sup>4</sup>Anaphylaxis Canada (AC), Canada . <sup>5</sup>Association Québécoise des Allergies Alimentaires (AQAA), Canada . <sup>6</sup>Allergy/Asthma Information Association (AAIA), Canada . <sup>7</sup>Division of Allergy and Clinical Immunology, Department of Medicine, McGill University Health Center, Canada .

Published: 12 May 2010

doi:10.1186/1710-1492-6-S1-P31

**Cite this article as:** Soller *et al.*: Treatment of initial allergic reactions to peanut inside and outside of health care facilities. *Allergy, Asthma & Clinical Immunology* 2010 **6**(Suppl 1):P31.

**Submit your next manuscript to BioMed Central  
and take full advantage of:**

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at  
[www.biomedcentral.com/submit](http://www.biomedcentral.com/submit)

