

Are Infants More At Risk of Anaphylaxis During Tahini Challenges?

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Introduction

An 11 month old infant had severe anaphylaxis after a tahini challenge at Epworth, needing multiple doses of adrenaline, adrenaline infusion and IV/intra-osseous fluid resuscitation. This prompted a review of our paediatric sesame oral food challenges (OFC) at Epworth hospital, Richmond and Royal Children's Hospital, Flemington in Melbourne.

Aims

Review of Paediatric OFC, with primary goals being to assess if younger infants are more at risk of anaphylaxis during tahini OFC. Secondary goal is to describe demographics, clinical features and outcomes in this group of children.

Methodology

Retrospective review of tahini oral food challenge between 2018-2021. Location: The Royal Children's Hospital and Epworth Healthcare, Melbourne. Both centres use tahini for their sesame challenges and the same challenge protocols.

Results

There were 75 challenges, 17 children reacted (23%), of whom 4 who had anaphylaxis (5% of total cohort).

Reactors were more likely to have a larger tahini skin prick test size than non-reactors (Table 1).

There was a trend noted, with children developing tahini anaphylaxis at OFC being younger and reacting to a smaller dose compared to those developing a generalised allergic reaction (Table 2).

SPT at a cut-off of > 4 mm, had poor sensitivity (53%) but better specificity (93%) in predicting a positive OFC.

Results Table 1.

	Reactors	Non-reactors	P-value
Total OFC= 75	17 (23%)	58 (77%)	
Median age(years)	7	8.0	p> 0.05
Sesame IgE-mediated	10 (58.8%)	28 (50%)	p> 0.05
Sensitized only	7 (41.2%)	28 (50%)	p> 0.05
Other IgE food allergy	15 (88.2%)	50 (86.2%)	p> 0.05
Other atopy	Eczema 72% AR 50% Asthma 50%	Eczema 72% AR 52% Asthma 57%	p> 0.05 p> 0.05 p> 0.05
SPT prior to OFC (median)	6mm	3mm	P=0.0013



Results Table 2.

	ANA	GAR	P-value
Total	4 (5.3%)	13 (17.3%)	
Median age (years)	3.5	7	P=0.13
SPT prior to OFC (median)	7.5 mm	5 mm	P=0.08
Accumulative dose of tahini at reaction (mg)	0.094	0.375	P=0.19

(ANA= Anaphylaxis, GAR= Generalized Allergic Reaction)

Conclusions

There was a trend to suggest that children who had tahini anaphylaxis at OFC were younger, and react to a smaller dose than those with a generalised allergic reaction, but further data is required to support these findings.

