

Anaphylaxis in Children: Experience of 485 Episodes in 1,272,482 Patient Attendances at a Tertiary Paediatric Emergency Department from 2007 to 2014

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Abstract

Introduction: Anaphylaxis is a predominantly childhood disease. Most of the literature on anaphylaxis has emerged from Western countries. This study aimed to describe the incidence, triggers and clinical presentation of anaphylaxis among children in Singapore, look for predictors for anaphylaxis with severe outcomes, and study the incidence of biphasic reactions. **Materials and Methods:** We retrospectively reviewed records of children presenting with anaphylaxis to our paediatric emergency department from 1 January 2007 to 31 December 2014. **Results:** We identified 485 cases of anaphylaxis in 445 patients. Cutaneous symptoms (urticaria/angio-oedema) were the most common across all age groups (481 cases, 99%), followed by respiratory (412, 85%), gastrointestinal (118, 24%) and cardiovascular (35, 7.2%) symptoms. Central nervous system symptoms (drowsiness/irritability) were rare across all age groups (11, 2.2%). Food was identified as the most common trigger across all age groups (45% to 63%). Seafood was the most common food trigger (57, 25%). A total of 420 (86.6%) children were treated with adrenaline, 451 (93%) received steroids and 411 (85%) received antihistamines. Sixty-three (13%) children fulfilled the criteria of severe anaphylaxis. There was no statistically significant association between severe anaphylaxis and the type of trigger ($P = 0.851$), nor an overall past history of atopy ($P = 0.428$). The only independent predictor for severe anaphylaxis was a previous drug allergy ($P = 0.016$). A very low prevalence of biphasic reactions (0.6% of study population) was noted in our study. **Conclusion:** We described the presentation and management of anaphylaxis in the Singapore population. A history of drug allergy is associated with severe presentation. Biphasic reactions are rare in our population.

Ann Acad Med Singapore 2016;45:542-8

Key words: Allergy, Angioedema, Hypotension, Paediatrics

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