

Clinical Characteristics of Anaphylaxis Cases in an Inner-City Pediatric Emergency Department (E.D.) in Brooklyn Over a 4 Year Period

Rationale: Anaphylaxis is estimated to affect 0.05-2% of the pediatric population with recent reports of an increase in the incidence in the pediatric population.

This study aims to identify the demographic and clinical characteristics of patients that were seen for anaphylaxis in an inner city, underserved area.

Methods: A retrospective chart review was performed of pediatric patients treated at University Hospital of Brooklyn E.D. for anaphylaxis, allergic reaction not otherwise specified, allergic urticaria, angioedema from 2016 to 2019. Each patient's chart was assessed to see whether they met the clinical criteria for anaphylaxis.

Results: 97 cases met anaphylaxis criteria between 2016-2019, which represented 0.2% of total ED visits. Mean age of anaphylaxis was 9.7yrs \pm 6.3 vs other pediatric ED allergy visits (8.1 yrs \pm 6.2 yrs) (p=0.03). 51 (52.5%) cases were \leq 10 years old with 12 (23.5%) cases in 1-2 years old. There were 56 (57%) males, 41 (43%) females. 85 (87.6%) were African Americans. 28 (28.8%) patients had underlying asthma, 7 (7.2%) had atopic dermatitis, 52 (53.6%) had a history of food allergy. Only 27 (28.7%) received epinephrine in the ED though Epipen was prescribed at discharge to 64 patients (70%). Only 27 (30%) were referred to an allergist upon discharge. (33/46)71.7% of food-induced vs (31/42)73.8% of idiopathic vs (1/1)100% of drug-induced vs (0/3) 0% of venom-induced anaphylaxis received epipen prescription (p=0.04). 11/97 (11%) were hospitalized. No deaths were reported.

Conclusions: There is a knowledge gap in pediatricians' use of epinephrine for management of anaphylaxis in E.D. and outpatient care. In our study, seafood-induced anaphylaxis was significantly higher at 18% than the national prevalence of 3-6% in the United States.