Auditing Adrenaline Autoinjector Device Compliance in a Paediatric Allergy Outpatient Service

Introduction Food allergy has become an increasingly common condition in the paediatric community over recent decades. Many of these patients are at risk of developing anaphylaxis following exposure to food allergens. Adrenaline Auto-Injector (AAI) devices are prescribed to these patients to be used in the event of anaphylaxis following accidental exposure. Guidance The Irish Food Allergy Network (IFAN) recommends that patients who are prescribed AAIs should carry two AAIs at all times. For school-going children, it is recommended that two AAIs should be stored in their school in the event of accidental exposure. Aims To evaluate parental compliance with carriage of AAI devices according to guidelines. To review parental confidence on when and how to use AAIs.

Methodology A one-page questionnaire was compiled, which was approved by Tallaght University Hospital Clinical Audit Committee. We invited parents of children attending the paediatric allergy outpatient and day-ward services who had been prescribed AAI devices to complete this questionnaire anonymously and return it to clinical staff. This audit was carried out from October 2018 to January 2019 in five outpatient and four day-ward clinics each month. Data was compiled in a spreadsheet and interpreted.

Results 53 parents completed our questionnaire. Patients ranged from nine months to sixteen years of age. 71% (n=38) reported carrying AAI devices. Of these, 66% (n=35) carried two devices. 88% (n=47) reported that their AAIs were within date. Of those without devices, 15% (n=8) reported AAIs were left in the car while another 11% (n=6) stated their AAIs were left at home. Regarding confidence in AAI training, 75% (n=40) of parents surveyed felt confident in knowing when an AAI should be given, giving a score of 4 or 5 on a scale of 1 to 5. 86% (n=46) were confident in knowing how to administer an AAI device.

Conclusion Our audit shows that 1 in 3 patients who were prescribed AAIs did not carry the recommended two devices with them when attending our outpatient services. Only 75% of patients and parents felt confident in knowing when they should give an AAI. This audit highlights the importance of taking the time to educate and re-educate patients and parents. Emphasis should be made on the importance of carrying AAIs at all times.

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Is There Any Relationship Between Degree of Control and the Risk of Exacerbation in Allergic Asthmatic Children with Monosensitisation and Poly-sensitisation?

Introduction Allergic asthma is a chronic inflammatory disease of the conducting airways that affected 1 in 10 children. Most children have allergic asthma that coincides with allergic sensitisation defined by the presence of serum immunoglobulin E (IgE) antibodies and/or a positive skin-prick test to the common inhaled allergens. It is important to identify the asthma trigger factors that could worsen asthma acutely to cause an exacerbation or perpetuate chronic symptoms and airflow limitation.

Aim To assess the correlation between children with monosensitisation and polysensitisation with the asthma control status in children with allergic asthma.

To assess if the monosensitisation and polysensitisation influence the episodes of exacerbations in children with allergic asthma.

Method A prospective study included 100 children aged between 5 to 18 years diagnosed with asthma and aeroallergen sensitisation was conducted in ‘Victor Gomoiu’ Clinical Children’s Hospital from January 2016 to September 2018. In each patient was assess asthma control status after 3 months. Within one year the exacerbations were registered also.

By specific serum IgE dosing, children were enrolled as mono or polynsensibilized. The correlation between mono and poly-sensitisation and the asthma control status in children with allergic asthma was assessed using Pearson Chi Square test.

The correlation between mono and poly-sensitisation and the influence on the exacerbations in children with allergic asthma was assessed using Pearson Chi Square test.

Results Group 1 was formed with patients with controlled asthma and group 2 with children partially controlled and uncontrolled asthma.

39 patients were with monosensitisation; out of these 12 had controlled symptoms and 27 with uncontrolled symptoms. 61 patients were with polysensitisation; out of these 11 had controlled symptoms and 50 with uncontrolled symptoms.

The exacerbations were divided in <2 and ≥2 in 1 year. <2 exacerbation: 4 were monosensitised and 7 were polysensitised.

≥2 exacerbations: 35 patients were monosensitised and 54 were polysensitised.