$\pm 281.4 \mu\text{g/g}$ and $204.45 \pm 190.29 \mu\text{g/g}$; $p > 0.05$) and ECP ($2053.13 \pm 1236.61 \text{ ng/ml}$ and $1258.88 \pm 1012, 80 \text{ ng/ml}$) didn't differ in both groups, however, the frequency of elevated ECP levels was higher in the group of CMPA (63% and 30%, $p < 0.05$). And the blood in the stool was detected more often (22.2% and 0%, $p < 0.05$). The correlation between the levels of calprotectin and ECP ($r = 0.55$, $p < 0.05$) and between the levels of FOG and ECP ($r = 0.37$, $p < 0.05$) was found.

Conclusion Clinical diagnosis of CMPA in infants should be supplemented with coprological tests of FOG, ECP and hidden blood in the stool for the well-timed diagnosis of CMPA gastrointestinal manifestations and secondary SLI.

P12

AUDIT ON ADRENALINE AUTOINJECTOR DEVICE COMPLIANCE IN A PAEDIATRIC ALLERGY OUTPATIENT SERVICE

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Introduction Food allergy has become an increasingly common condition in the paediatric community over recent decades¹. 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 exposure².

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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P13

IS THERE ANY RELATIONSHIP BETWEEN DEGREE OF CONTROL AND THE RISK OF EXACERBATION IN ALLERGIC ASTHMATIC CHILDREN WITH MONOSENSITISATION AND POLYSENSITISATION?

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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 sensitization 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 sensitization was conducted in 'Victor Gomoiu' Clinical Children's Hospital from January 2016 to September 2018. In each patient was assessed 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 polysensitized. The correlation between mono and polysensitisation and the control asthma status in children with allergic asthma was assessed using Pearson Chi Square test.

The correlation between mono and polysensitisation 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 monosensitized and 7 were polysensitized.

≥ 2 exacerbations: 35 patients were monosensitized and 54 were polysensitized.

Using Pearson Chi Square test to evaluate the correlation between children with monosensitisation and polysensitisation with the degree of control asthma we have obtained a p value > 0.05, statistically insignificant.

Using Pearson Chi Square test to evaluate the correlation between children with < 2 exacerbations and ≥ 2 exacerbations with mono and polysensitisation in children with allergic asthma we have obtained a p value > 0.05, statistically insignificant.

Conclusion In this study of children with atopic asthma, mono and polysensitisation does not influence the degree control and also hasn't influenced the asthma exacerbations during one year.

P14 EGGSTRA SPECIAL TREATMENT: IN HOSPITAL FOOD CHALLENGES FOR EGG ALLERGY: ARE WE DOING TOO MANY?

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Aim To assess compliance of our paediatric department with internationally recommended standards for the assessment and management of egg allergy.

Methods Written records of all egg challenges performed in a paediatric assessment unit were collected from 2013–2018. We divided reactive symptoms into three categories; GI, respiratory (mild wheeze) and mucocutaneous involvement. We compared the reactions in children with pre-existing risk factors to those without. The British Society for Allergy and Clinical Immunology (BSACI) recommends that children with mild egg reactions have incremental forms of egg at home. They recommend in-hospital food challenges are reserved for children with co-existing asthma or previous anaphylaxis. We compared our practice with their 2010 egg allergy management guidelines.

Results There were 161 challenges over five years. 92% of those challenged passed (n=149). 27.9% (n=45) had no reaction. 42 charts were available for more detailed assessment.

In the charts reviewed 47% (n=20) had asthma and 57% (n=24) had previous history of anaphylaxis. Of those with asthma, 73.6% (n=14) passed the challenge and 26% (n=5) failed and developed anaphylactic symptoms. The median age of those who failed in this asthma cohort was 9.4yrs and 10.7yrs in those that passed. One patient developed all three symptoms, and 9 developed two symptoms. In the non-asthma cohort (n=22) two patients developed all three, 11 had two symptoms, six patients had one symptom.

Of the 24 children with an anaphylaxis history 79% (n=19) passed the challenge and 20.8% (n=5) failed - all of whom also had asthma. Older patients were more likely to pass - median age 11 vs 9.7yrs.

Conclusion The natural course of egg allergy is to diminish with age. This combined with the BSACI recommendation that clinical diagnosis is sufficient for most children who are not high-risk, removes the need for in-hospital food challenges. Our results show older children were more likely to pass reinforcing the predictability of the natural history. We also showed that even in the 'at risk' group a high percentage were passing and their reactions weren't

significantly worse than those without asthma. We currently do not implement BSACI guidelines. This is expensive and may preclude true high-risk candidates from specialist assessment. This study raises some questions: Could children with mild asthma be observed reintroducing baked egg rather than going through a formal challenge? Is it possible to predict the who is going to react from risk factors?

P15 FORMATION OF FOOD ALLERGIES IN CHILDREN BORN TO MOTHERS WITH BRONCHIAL ASTHMA

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Introduction Infants with at least one biological parent who has allergic conditions are at risk for developing allergic disease. Caesarean born infants have a more slowly diversifying microbiota, with differences reported from normally born infants. This, in turn, can affect immunophysiological development with a heightened allergic disease risk.

The aim of this study was to investigate the impact of birth mode of delivery on childhood asthma and allergic diseases in children from mothers with moderate persistent asthma.

The study included 68 mother-child pairs. 22 children (main group) were born by Caesarean section, and 46 children (comparison group) were delivered vaginally. Pregnant women were included in the study with a gestation period of 32–38 weeks. Children were observed in the maternity hospital (1, 3–4 days), then monthly until the age of 1 year with a clinical assessment of the child's health. The presence, age of onset of symptoms, severity (prevalence) of skin (atopic dermatitis, urticaria, angioedema) and respiratory manifestations of allergy (rhinitis, wheezing with or without Viral Upper respiratory infection; croup; chronic cough). Mathematical-statistical data processing was carried out using the program Statistica 10.0 for Windows-10. The criterion for statistical significance was $p < 0.05$.

Results In the group of children born by caesarean section, severe regurgitation was significantly more frequent (53% and 29%, $p < 0.05$), flatulence persisting for up to 6 months (82% and 68%, $p < 0.05$), colic lasting longer than 3 hours (93% and 28%, $p < 0.05$), dyschezia (59% and 33%, $p < 0.05$), loose stools (86% and 57%, $p < 0.05$), mucus in the stool (100% and 73%, $p < 0.05$), appeared in 1–2 weeks of life (68% and 45%, $p < 0.05$), skin manifestations of allergy (95% and 74%, $p < 0.05$), incl. diffuse (76% and 53%, $p < 0.05$), chronic cough (18% and 2%, $p < 0.05$), the presence of the first episode of wheezing at 4–5 months (71% and 53%, $p < 0.05$), 2 episodes of wheezing in the first year of life (86% and 20%, $p < 0.05$), the presence of croup at the age of 3–6 months (80% and 0%, $p < 0.05$), 2 episodes of croup in the first year of life (40% and 14%, $p < 0.05$).

Conclusion For children with a positive family history of atopic diseases caesarean section can be assumed as an epigenetic factor, contributing to an earlier and pronounced manifestation of not only gastrointestinal, but skin and respiratory symptoms of allergic disease.