P7

WHAT ARE THE RISKS OF ALLERGY PREVENTION? A SERIES OF THREE CASES OF SESAME ANAPHYLAXIS ON FIRST INGESTION

Emma Ruth*, Aileen Byrne. *Our Lady's Children's Hospital, Crumlin, Dublin, Ireland*

10.1136/archdischild-2019-epa.363

Background The prevalence of food allergy amongst young children in the developed world is estimated to be 5%. Recently published data demonstrates that early introduction of food allergens prevents food allergy¹. There remains much controversy over whether these foods should be introduced with or without prior allergy skin testing. On one hand, access to such testing, is universally delayed due to limited resources. On the other hand, introduction without testing may trigger an allergic reaction. New UK and Australian guidance have advised introduction of peanut and egg at 6 months without testing. To date, no life-threatening reactions have been reported related to the introduction of these allergenic foods.

However, it remains unclear whether other major allergens such as sesame, could be introduced in this way. Sesame allergy affects approx. 0.1% of the population but is more prevalent in areas with high consumption such as the Middle East where it is the second commonest cause of anaphylaxis in Israeli children².

The aim of this cases series is to highlight three cases of sesame anaphylaxis in infants under one year. The sesame was introduced at home without prior testing.

Methods A retrospective chart review was undertaken of known cases of sesame anaphylaxis in infants, admitted to our tertiary Paediatric Hospital.

Results Our patients ranged in age from 6 to 8 months and all presented via the Emergency Department. They all received tahini-containing hummus in the home setting for the first time prior to presentation. Patient one developed perioral erythema, facial flushing, angioedema, tongue swelling and profuse vomiting, he was administered adrenaline by ambulance personnel. Patient two became immediately distressed, developed stridor with facial and lip swelling, vomiting and diarrhea. He received two doses of adrenaline pre-hospital. Patient three developed immediate perioral urticaria spreading to his neck. He became pale and lethargic and vomited. This patient did not receive adrenaline but was managed with antihistamines and oral corticosteroids.

All three infants showed subsequent positive SPT to sesame (ranging from 4–6 mm) with negative testing for chickpea.

Conclusion Early introduction of peanut is now taking place worldwide with no reported cases to date of anaphylaxis. Here we present 3 cases of sesame anaphylaxis from just one institution. This case series highlights that early introduction of food allergens is likely to have differential risk profiles, with sesame seed introduction likely to carry a higher risk if introduced to all infants without prior screening.

P8

FOLLOW UP OF SUBLINGUAL IMMUNOTHERAPY IN A PAEDIATRIC POPULATION AT CORK UNIVERSITY HOSPITAL

Sinead O'Donnell*, Megan Morris, Jonathan Hourihane. *Department of Paediatrics, Cork University Hospital, Cork, Ireland*

10.1136/archdischild-2019-epa.364

Introduction Allergic rhinitis is an immune-mediated response of the nasal mucosa to allergens, which is clinically characterised by paroxysms of sneezing, rhinorrhea, and nasal obstruction which is often accompanied by itching of the eyes, nose and palate. In the most severe cases, patients can still have a reduced quality of life despite optimal treatment with antihistamines, eye drops and nasal sprays. When the symptoms of allergic rhinitis persist, they can have a dramatic impact on the quality of life of the child and their family. Untreated symptoms can have a detrimental effect the child's sleeping pattern which consequently can impact negatively on their growth potential, cognition and participation in social activities. Sublingual Immunotherapy (SLIT) can alter a patient's sensitivity to inhaled allergens and improve symptoms which do not respond to the standard therapies.

Aim and methods The aims of this study were to assess the effect SLIT had on patients both during the treatment and after. Effects were determined by retrospective chart review. 38 children (age 5–17) completed 3 years of SLIT at Cork University Hospital between 2010 and 2016. 34 patient/guardians were contacted by telephone to provide additional information; the remaining 4 were unreachable by phone.

Results In the study population, Immunotherapy was prescribed for house dust mites (24%) and grass pollen (76%). Treatment with SLIT reduced symptoms of allergic rhinitis in 91% of patients during SLIT. 62% had an improvement in symptoms post completion of therapy and 29.4% maintained the level of reduction during treatment. There was a reported drop in the amount of patients using medications such as antihistamines, nasal sprays and eye drops. 50% of the patients had a diagnosis of asthma as well as allergic rhinitis. 76% of these patients had an improvement of their asthma symptoms, resulting in a reduction of inhaler use. Overall, 88% of the patients were satisfied with the SLIT and they would recommend it to others.

Discussion The effect of grass pollen and HDM allergen SLIT for allergic rhinitis is substantial and sustained in medium term, patients experienced a reduction in both symptoms and medication use. There is also an effect of SLIT on asthma which must be noted, as these patients also experienced a reduction in symptoms and medication use.

P9

DOES PENICILLIN ALLERGY EXIST AMONG CHILDREN? A RETROSPECTIVE STUDY ASSESSING THE PREVALENCE OF PENICILLIN ALLERGY AMONG CHILDREN UNDERGOING A PENICILLIN DERIVATIVE CHALLENGE TEST IN THE COMMUNITY, FOLLOWING RASH OCCURRING AFTER TREATMENT WITH A PENICILLIN DERIVATIVE

¹Abraham Schechter*, ¹Menachem Bitan, ²Yosef Schechter, ¹Tatiana Voltsinger. ¹*Meuhedet Health Services, Jerusalem District, Jerusalem, Israel;* ²*Shaarei Zedek Medical Center, Jerusalem, Israel*

10.1136/archdischild-2019-epa.365

Background rashes are common among children treated with penicillin derivatives. Many are recorded as 'penicillin allergy' without any testing.

Aim This study aimed to demonstrate that most children are not 'allergic' to penicillin and can therefore use penicillin again in the future. In addition, it aimed to demonstrate that

the oral penicillin challenge test can be safely performed in the community clinic setting.

Methods In this retrospective study the electronic medical files of 402 study participants, of ages 0–17, were reviewed. The included patients were those flagged as allergic to penicillin, referred to a community allergy clinic between 2011–2018, were evaluated by an allergist, and underwent a penicillin or amoxicillin challenge test. The challenge test results were collected and reviewed for documentation of allergic reactions. None of the children had undergone an allergy skin or blood test prior to the challenge test. In addition, the medical files were reviewed for documentation of later use of penicillin derivatives after the challenge test.

Results Apart from a single vomiting incident during the challenge test, none of the challenge tests elicited any responses. Eighty-two (26%) children who underwent the challenge test, used penicillin again at a later stage. Repeat diagnosis of penicillin sensitivity was recorded for 7 (3%) children, following onset of rash following exposure to penicillin after the challenge test.

Conclusions The vast majority of penicillin allergy diagnoses among children are inaccurate, as the rash appearing during use of the medicine is unrelated to an acute allergic reaction. Viral diseases can be a significant factor underlying these rashes. The oral penicillin derivative challenge test performed in community clinics are safe, and should therefore be preferred for any child presenting late-onset rash during penicillin treatment. Widespread use of this challenge test will assist in reducing extraneous use of broad-spectrum antibiotics and resistance to these drugs.

P10 MANAGEMENT OF SEVERE ATOPIC AND VERNAL KERATOCONJUNCTIVITIS

¹Marta Chlubek*, ¹Pasan Fernando, ²Melanie Hingorani, ²Stephen Tuft, ²Annegret Dahmann-Noor. ¹University of Cambridge, Cambridge, UK; ²Moorfields Eye Hospital, London, UK

10.1136/archdischild-2019-epa.366

Background Vernal keratoconjunctivitis (VKC) and atopic keratoconjunctivitis (AKC) are severe allergic diseases of the ocular surface which can have sight-threatening complications such as shield-shaped ulcers and plaques.

Paediatricians, general practitioners and optometrists play an important role in the early detection of severe VKC and AKC to ensure swift onwards referral to an eye clinic for treatment with topical or oral immunosuppressants or modulators and, if required, surgical intervention.

Purpose To evaluate the indications for oral corticosteroid treatment, as an indicator of severe inflammation requiring systemic immunosuppression, in the management of VKC/AKC in children, and to describe treatment outcomes.

Methods We reviewed the medical records of children up to the age of 16 years who had been prescribed oral corticosteroids for VKC/AKC at a tertiary referral centre in the UK between 2008 and 2018. We noted age, gender, severity of corneal epithelial disease (Cameron and Moorfields grading systems), proportion of ulcers healed within 2 weeks of starting oral corticosteroids, proportion of children requiring surgical intervention, and time from starting steroids to epithelialisation. In children who received oral steroids on more than one occasion, we included the first episode only.

Results We identified 16 children and young people (median age 11.5 years, interquartile range 9–14); 15 (94%) were boys.

Seven (44%) children with severity grade 1 Cameron/2 Moorfields had received oral corticosteroids in addition to topical eye drops; re-epithelialisation in under 14 days was achieved in 86% (6/7), while 14% (1/7) required additional superficial keratectomy. Seven (44%) patients with severity grade 3 (established plaque) received oral steroids; in four it was supplementary to superficial keratectomy, given for anti-inflammatory purposes, and to prevent recurrence of the ulcer due to uncontrolled inflammation. In three, elective keratectomy was not carried out initially; one plaque ulcer resolved spontaneously, while two did not re-epithelialise and required surgery 48 and 63 days after oral steroids were started. Two (13%) patients with low-grade lesions received oral therapy due to imminent risk of progression. Re-epithelialisation time was measured for one of these patients and found to be under 14 days.

Conclusions The clinical signs of severe VKC/AKC which require topical and/or systemic corticosteroids can be detected without specialist equipment, by instillation of fluorescein eye drops. Swift referral to an eye clinic allows timely treatment and optimises outcomes. We propose a simple algorithm to guide management.

P11 SECONDARY LACTOSE INTOLERANCE AND COW'S MILK PROTEIN ALLERGY IN INFANTS

¹Valeria Novikova*, ¹Natalya Bogdanova, ¹Natalya Prokopyeva, ²Sergey Lapin, ²Daria Kuznetsova, ³Pavel Vorontsov. ¹St. Petersburg State Pediatric Medical University, St. Petersburg, Russian Federation; ²St. Petersburg First Medical University, St. Petersburg, Russian Federation; ³medical social institution, St. Petersburg, Russian Federation

10.1136/archdischild-2019-epa.367

Introduction Cow's milk protein allergy (CMPA) is one of the causes of secondary lactose intolerance (SLI) in infants.

The aim To determine the possibility of faecal tests: calprotectin, ECP and hidden blood in the stool for the diagnosis of gastrointestinal manifestations of CMPA in infants with SLI.

Patients and methods 30 children, aged from 1 to 5 months, full-term born, suffering from infantile colic and gastrointestinal disorders due to lactose intolerance, confirmed by FOG test the background of cow's milk protein intolerance, were observed. 63.33% of children were breastfed, 36.67% were mixed, received medical infant formula. CMPA in examined participants was diagnosed based on recommendations of EAACI (2014) and CoMiSS scale. SLI was confirmed by FOG, which was carried out by spectrophotometric measurement of the concentration of Na⁺ and K⁺ ions. Calprotectin and ECP in the stool were determined by ELISA. To detect the hidden blood in the stool, out-of-point «Colon View» test was used. The control group consisted of 10 healthy similar aged, breastfed infants. Statistical analysis was carried out using Stat Soft Statistica 12.0. for Windows-10.

Results Participating children suffered from colic in 86.67%, regurgitation in 56.67%, diarrhea in 83.33%, ishesion in 46.67%, constipation in 13.33%, blood streaks in the stool in 13.33%, atopic dermatitis in 73.33%. All had a combination of two or more gastrointestinal disorders.

The average level of FOG in CMPA was higher than in healthy ones (204.94 ± 23.56 Osmol/kg. And 116.52 ± 65.8 Osmol/kg; P < 0.001). Average values of calprotectin (463.89