ABSTRACTS

Friday, 17 March 2017
Oral Abstracts Presentations
16:45 - 17:15 Plenary Room

001 Diagnosis And Management Of Eosinophilic Esophagitis: A 13-Year Retrospective Review In A Pediatric Population In The Netherlands.

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Keywords: Eosinophilic Esophagitis Pediatric Diagnosis Management

Introduction
Eosinophilic esophagitis (EE) is a chronic, immune/antigen-mediated disease characterized clinically by symptoms related to esophageal dysfunction and histologically by eosinophil-predominant inflammation (>15 eosinophils per high power field). EE is increasing in incidence and prevalence, and is a major cause of gastrointestinal morbidity among children and adults. In young children the symptoms vary from frequent vomiting to food refusal as older children and adolescents present with refractory gastroesophageal reflux symptoms, dysphagia or even food impaction. In 2007, international consensus recommendations were published concerning the diagnosis and management of EE in children and adults, providing clinical and histopathologic guidance for the diagnosis and treatment of EE. In 2014, the ESPGHAN published the practical medical position paper "Management guidelines of EE in childhood". The aim of our was to determine the diversity in diagnosis and management of EE in pediatric patients in the Netherlands in comparison to the international consensus recommendations before 2014.

Methods
The medical records of 154 children younger than 18 years old with biopsy proven EE treated from 2000 to 2013 by pediatric gastroenterologists in the Netherlands were reviewed. Patient characteristics, clinical, endoscopic, and histologic findings were recorded and analysed using SPSS.

Results
EE diagnoses have risen from one in 2000 to 24 in 2013, the majority being diagnosed after 2008. 69% were male and the median age at diagnosis was 9.3 years (range 3 months to 18 years). In 67.5% symptoms of refractory GE reflux or dysphagia was the indication for endoscopy, in 18.5% was this even food impaction. In 74% macroscopic findings as granular mucosa, longitudinal furrows, white plaques and/or trachealization were present. In 51% the location (distal, mid, or proximal esophagus) of the biopsies were recorded and in 31% the average count of eosinophils per HPF was reported. The initial treatment consisted of local (42%) or systemic (6%)
corticosteroids, elemental or elimination diet (31%), a combination of diet and corticosteroids (15%) or no treatment (6%). The amount of endoscopies during the diagnostic process varied from 1 to 12 per patient.

**Conclusion**

Eosinophilic esophagitis is increasingly diagnosed in the pediatric population of the Netherlands. The diagnostic process and treatment varies significantly. An even better recognition and more uniformity in the management of EE is necessary.

**O02 Adult EoE Patients’ Satisfaction With Different Eosinophilic Esophagitis-Specific Treatment Modalities**

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**Keywords:** TSQM, Patient Satisfaction, Swallowed Topical Corticosteroids, Proton Pump Inhibitors, Dietary Therapy

**Introduction**

Treatment options for EoE patients include drugs (proton-pump inhibitors [PPI], swallowed topical corticosteroids [STC]), food elimination diets, and esophageal dilation. We aimed to assess adult EoE patients’ satisfaction with different EoE-specific treatment modalities used in the past 12 months.

**Methods**

We created a questionnaire that included items that queried general demographic characteristics (7), patient history and presence of atopic disease (8), EoE-specific therapy (9), concomitant medication use (7), considerations for therapy choice (2), and satisfaction with therapies recalled over 12-months period (assessed using the validated “Treatment Satisfaction Questionnaire for Medication” [TSQM], 52). Three psychologist-guided focus groups with EoE patients were conducted to inform the content and the structure of the questionnaire and ensure that patient understand the items, instructions, and response options. The questionnaire was sent to 148 patients in Switzerland.

**Results**

Patient response rate was 74% (108/147). Mean patient age was 46.3 years (SD = 15.9), 85/108 patients (79%) were male, and mean disease duration was 6.8 years (SD = 5.1). In the last 12 months, 25%, 84%, 19%, and 13% were treated with PPI, STC, food elimination diet, and esophageal dilation, respectively (37.0% patients received more than one treatment; 7.4% of patients did not receive any treatment). Patients identified the following considerations as important for the therapy choice: the treatment effect on the symptoms (89%), the treatment effect on esophageal inflammation (76%), possible side effects (69%), and ease of therapy use (58%), physician’s recommendation (50%), and compatibility of therapy with lifestyle (46%).
When asked about the single most important criterion for the choice of therapy, 49%, 34%, and 12% of patients chose the effect of treatment on symptoms AND esophageal inflammation, the effect of the treatment on the symptoms, and the effect of treatment on esophageal inflammation, respectively, as deciding factor. The TSQM scales scores for patients on PPI, STC, and diet are shown in Table 1.

**Conclusion**

Adult EoE patients consider both effect of medication on symptoms and esophageal inflammation as important criteria, when choosing EoE therapy. EoE patients appear to be satisfied with PPI, STC, and dietary therapy.

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<tr>
<th>TSQM scales</th>
<th>PPI (n = 27; median treatment duration 6 years [3 - 9])</th>
<th>STC (n = 84; median treatment duration 5 years [2 - 6])</th>
<th>Diet (n=21; median treatment duration 2 years [1 – 4.5])</th>
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<tr>
<td>Effectiveness</td>
<td>66.7 [38.9-77.8] 100 [100 – 100] 88.9 [77.8 – 100] 71.4 [50 - 85.7] 79.8 [69.4 – 85.5]</td>
<td>83.3 [66.7 – 94.4] 100 [100 – 100] 83.3 [66.7 – 100] 78.6 [64.3 – 92.9] 84.4 [72.8 – 92.3]</td>
<td>77.8 [50 – 88.9] 100 [100 – 100] 50 [33.3 – 66.7] 78.6 [57.1 – 92.9] 76.6 [59.8 – 81.9]</td>
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<td>Side-effects*</td>
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<td>Convenience</td>
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<td>Average score</td>
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**003 17 Usefulness Of Food Sensitization Determination In Eosinophilic Esophagitis**

**Maria Valle Campanón Toro**, Eva Macías Iglesias, Francisco Javier Muñoz Bellido, Miriam Sobrino García, Esther Moreno Rodilla, Elena Laffond Yges, María Teresa Gracia Bara, Ignacio Dávila González

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**Introduction**

Eosinophilic esophagitis (EoE) is a chronic antigen-mediated clinicopathologic disease of the oesophagus characterized by an eosinophil-predominant inflammatory infiltrate.

EoE has been related to form of food allergy so an evaluation of IgE-mediated food sensitivity is frequently performed for patients with EoE. However, the clinical relevance of identifying IgE-mediated sensitivity to food in adults is unclear.

**Methods**

Our objective was to determine the epidemiology of adult patients with EoE and the prevalence of positive skin test and IgE-associated food allergy at the time of diagnosis of EoE.

A retrospective medical record review identified 118 patients with a confirmed diagnosis of EoE (by gastrointestinal biopsy) evaluated in the adult allergy clinic at the University Hospital of Salamanca from 2007 to 2015. Gender, age of diagnosis, symptoms and its relation with foods or not, atopic history (eczema, asthma or rhinoconjunctivitis), family history and allergy testing performed were recorded.
Results
For 118 patients, 92 were men (78%) with a medium age of 37.1 years. There were no significant differences in age between genders. The maximum age of diagnosis was 63 years for men and 70 for women.
Concerning to atopy, 83 patients (70.3%) had a previous diagnosis of eczema, rhinoconjunctivitis or asthma, with different level of disease. We did not found significant association between family history of atopy and EoE; 64 patients (54.2%) have no atopy in their families.
Only 18 patients (15.25%) referred a clear relationship of symptoms with specific foods or group of foods.
Evaluation of food sensitization by skin prick testing was performed in 97.46% of patients, showing positives results in 65 (55.1%). Total serum IgE levels measures (ImmunoCAP Termofisher®) were performed in 61 patients (51.7%) founding elevated levels (above 120kU/l) in 35 patients (50.7%).41 patients showed specific IgE levels to at least one specific food allergens.

Conclusion
It has been hypothesized that food are triggers of disease; patient sensitizations to foods and improvements in symptoms and inflammation after food eliminations has been supposed and supported in severe studies.
In this study, we found skin testing and measuring IgE as poor usefulness in EoE diagnosis, due to high proportion of positives results in patients without symptoms to specific food. Nevertheless, more studies with bigger population and avoiding possible biases would be necessary to confirm it.
**Introduction**

Eosinophilic esophagitis (EoE) is an increasingly prevalent disease, and its relationship with the allergic spectrum has been well established, relating to food and environmental allergens. The optimal tests to identify the food allergen involved are still unclear.

The objective of the study was to determine the demographic, clinical, endoscopic, histological and allergological characteristics of pediatric patients diagnosed with EoE between 2008 and 2015 in our reference area and to determine the usefulness of Prick test and sIgE for their management.

**Methods**

It is a descriptive observational study in children and adolescents (<16 years), that have been diagnosed of EEO between 2008 and 2015 by compatible clinical history, endoscopy and histology, studied in a multidisciplinary unit in a third level hospital in the region of Barcelona that includes anamnesis, skin tests for neuroallergens, skin tests for foods, serum total and specific IgE.

**Results**

A total of 25 patients, 17 male and 8 female, were analyzed. The median age of the diagnosis was 10-11 years (range <1 to 15 years), with no gender differences. 18 patients had a history of atopy in the form of food allergy (5), respiratory allergy (6) and food and respiratory allergy (7). The total IgE of the patients ranged from 24.4 to 1664 uL. The most frequent clinical presentation was impaction, followed by dysphagia, chest pain, abdominal pain and dyspepsia or GER. In 22 of the 25 patients attempting therapy with PPI, it was completely effective in 7 (31.8%), and partially effective in 5 (22.7%). Of the non-responders 100% subsequently responded to empirical elimination diet. In 13 of the 25 patients with a TC-guided and clinical avoidance diet, 2 patients (15.4%) presented a complete response, while the remaining 11 (84.6%) were required to initiate empirical avoidance diets to obtain remission of the disease. The most frequent responsible food was the cow-milk protein. Only 1 of them had IgE-mediated sensitization for the latter.

**Conclusion**

The use of a skin test or IgE -directed diet exclusively for the management of EEO was less effective than the empirical diets in non-responders to IBP and in most cases the allergen responsible (cow-milk protein) had not been positive in skin tests or sIgE.
Obviously there is an association of atopy in patients with EEo, although given that the pathophysiological mechanism is not IgE mediated, the prick test and sIgE determination are not useful for its diagnosis and management.

**P02 Eosinophilic Esophagitis: Experience In A Third Level Hospital.**

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**Keywords:** Esophageal Dysfunction, Treatment Response, Eosinophilic Esophagitis, Multidisciplinary Team.

**Introduction**

Eosinophilic esophagitis (EoE) is a chronic, immune-mediated and progressive disease characterized by dysfunction and esophageal eosinophilic infiltration (>15 Eos by HPF) in the esophagus that requires a multidisciplinary approach. This disorder affects children and adults and has a high impact on their quality of life. The aim of this study is to evaluate demographical and clinical characteristics, focusing in allergic conditions in a population of EoE patients.

**Methods**

A retrospective evaluation of 60 adult patients diagnosed of EoE between 2009 and 2016 was performed. A multidisciplinary team composed by allergist, gastroenterologist, pathologist, and nutritionist was created to evaluate and manage these patients. Demographical characteristics, differential diagnosis, allergological evaluation (including inhalant and foodstuff skin prick tests) and response to therapy were evaluated.

**Results**

Mean age was 39.75 years (Range=13-67), 70% of patients were males. SPT were performed in 45 patients being positive in 86.66% (n=39). Most common sensitizers were house dust mites 66.66% (n=26), nuts 41.02 (n=16), cat 38.465 (n=15), grasses 38.46% (n=15), dog 38.46% (n=15), and nsLTP (lipid transfer protein) 35.89% (n=14). 82.05% of sensitized patients referred clinical allergy. On the other hand, from our cohort, 21.6% (n=13) of patients had EoE responding to proton pump inhibitors, 8.3% (n=5) responded to diet, 33.33% (n=20) responded to topical corticosteroids, some other patients responded to combined treatment 28.33% (n=17) and 1.6% (n=1) had a refractory EoE.

**Conclusion**

The present study shows a high prevalence of allergy in this group of patients with EoE, as previously reported, Response to treatment differs in each patient, so an individualized management of EoE is recommended. A multidisciplinary approach of EoE is crucial to have a good control of this complex disease.
**P03 EOSINOPHILIC ESOPHAGITIS: TRENDING**

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**Keywords:** Eosinophilic Esophagitis, EoE, Trending, Google® Trends, Web-Search

**Introduction**

Eosinophilic esophagitis (EoE) is a recently recognized pathologic entity with increasing interest amongst the medical community. Little is known about the general population’s interest in this matter, particularly through means of web-searching for information. The aim of our study is to identify an association between subsequent months and web-search for EoE.

**Methods**

Google® Trends (GT) is a web-based search tool used to analyze the searching trends of specific queries over a defined period of time in Google®. It works by analyzing the number of Google® searches made with the term/s entered, which are proportionate to the total number of searches done over the same time and region. GT’s outputs are normalized for the total number of searches and for the defined period. Another feature of GT is the ability to explore the results by region, comparing the search term popularity relative to the total number of Google® searches performed at that time, in that location. We conducted a worldwide online retrospective analysis, using GT with the term “eosinophilic esophagitis”, in English, over the period of 2004-2016. Spearman correlation was used to identify a linear relationship between months and the GT search index for “eosinophilic esophagitis”.

**Results**

Our study used the data extracted from the period described above, covering 13 years of the GT data. March 2012 was the month with the maximum GT search index and February 2004 had the minimum number of searches. During the period studied, there was a linear increase in the GT search index ($rs=0.845; p<0.001$). Web searches were mainly from the United States of America (100), Canada (44), Australia (39) and the United Kingdom (14).

**Conclusion**

A very strong positive association between successive months and worldwide web searches for EoE was found. Despite its increasing interest, measured by means of web search action, USA and Canada showed the most interest in this subject.

**P04 Eosinophilic Gastroenteritis And Acute Abdomen: A Case Report.**

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Keywords: Eosinophilia, Gastroenteritis, Diagnosis, Management, Elemental Diet.

Introduction
Eosinophilic Gastroenteritis (EGE) is a rare inflammatory disorder which affects the gastrointestinal (GI) tract, characterized by a prominent eosinophilic tissue infiltration, in absence of known causes of eosinophilia.

Methods
Male, 56 y-o, Caucasian. Atopy (allergic rhinitis), no family history of autoimmune disorders. In good health until when compare severe abdominal distension and cramping pain, preceded for a few days by dysphagia and diarrhea. At the Emergency Department WBC 28.0x10^3/µL - EOS 11.7x10^3/µL-41.9% and the abdomen US detected mild peritoneal fluid with wall thickening of the bowel loops (8mm). Suspecting an acute abdomen he admitted in urgency. Chest-abdomen CT unremarkable, on colonoscopy normal aspect but the histological assessment reported eosinophilic infiltration (EOS>20/hpf) in the lamina propria. On EGDS tabby gastric antrum with whitish specks and histological evaluation reported eosinophilic infiltration (EOS 15/hpf) in the lamina propria. To exclude other possible causes of eosinophilia have been revealed: parasitological stool(-), fecal calprotectin(-), Ab-ATG(-), ANA(-). IgEtot 1.278 IU/mL, skin prick test(-), RAST(-), leaky gut test(+). Hence we made diagnosis of mucosal EGE. Due to the atopy background, we introduced an elemental-diet with gradual resolution of GI symptoms in 2 weeks, thus we decided not to administer corticosteroids (CS). On discharge improvement of the laboratory values: WBC 10.0x10^3/µL, EOS 0.8x10^3/µL-8.2%; IgEtot 120 IU/mL and reduction on US of the peritoneal fluid and of the bowel loops thickness (5 mm). On the follow-up visit, about 30 days later, the patient referred subjective well-being with normal laboratory values and US images. Currently the patients is continuing the diet with a gradual reinsertion of the single aliments.

Results
EGE pathogenesis is uncertain, the major hypothesis is that a loss of integrity of the GI-barrier and the consequent crossing antigens determine both IgE and delayed Th2 response with eosinophilic infiltration and it’s been reported that, in >60% of mucosal EGE, the disease can hardly improve introducing a diet loss in allergens.

Conclusion
Due to his protean manifestations that can mimic many GI disease (both medical and surgical like acute abdomen) EGE require a prompt identification and, due to his chronic and relapsing course, a maintenance regimen is often required but, while CS are the most effective drugs for the treatment of relapses, further studies are needed about long-term therapy.

P05 Exacerbation Of Eosinophilic Esophagitis With Bacterial Superinfection In Adolescent

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Keywords: Eosinophilic Esophagitis, Adolescent, Stenosis, Bacterial Superinfection

Case description
16-year-old boy presented to pediatric gastroenterologist with dysphagia and food impaction. An esophagus and stomach endoscopy was performed and our findings included thickened mucosa and severe narrowing of the esophagus caliber suspected of eosinophilic esophagitis. According to the allergy tests we recommended a targeted elimination diet and swallowed corticosteroids. In seven weeks control endoscopy was realized and our treatment seemed to work properly. Corticosteroids were finished after 4 months, diet stayed unchanged. 2 months later our patient was admitted to hospital with painful swallowing, chest pain and fever, C-reactive protein was elevated. Control endoscopy showed severe inflammation of esophagus, erosions and aphthous lesions. We had to reevaluate our approach and the boy started systemic antibiotic and steroid therapy with good clinical and endoscopical effect.

P06 Impact Of The Diet In The Treatment Of Eosinophilic Esophagitis

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Keywords: Eosinophilic Esophagitis, Food Allergy, Food Sensitization, Elimination Diet, Treatment

Introduction
Eosinophilic esophagitis (EoE) an inflammatory immune-mediated condition with an increasing incidence in both pediatric and adult patients, represents a challenge in clinical practice. Our aim was to evaluate the impact of diet in the therapeutic approach of patients with EoE.

Methods
Retrospective characterization of 57 patients with EoE, followed at our Immunoallergy Department. All patients underwent clinical, endoscopic and allergic sensitization (food and aeroallergens) evaluation work-up. SPSS Statistics V.21.0 software (IBM, Chicago, USA) was used for statistical analysis. Significance was defined by p-value<0.05. Chi-Square test was used to evaluate the impact of diet, associated or not to pharmacological treatment, in clinical and histological regression.

Results
The median age at first appointment was 17 [1.4;70] years old, 19% children (<10 years), 39% adolescents (≥10 and <19 years) and 42% adults; 63% (n=36) were male. The median age of EoE symptoms onset was 12 [0.25;60] years. Most patients had previous allergic diseases (88%), 74% (n=42) were sensitized to aeroallergens and 25% (n=14) had previous food allergy. Food sensitization was found in 65% (n=37) of the patients, mainly to cow’s milk (46%), nuts and peanut (33%), cereals
(30%) and egg (21%). For pharmacological treatment approach, 88% (n=50) were treated with swallowed fluticasone and oral corticosteroids were prescribed in 8 patients. Dietary elimination was recommended in 60% (n=34) of the patients guided by the clinical aspects and documented food sensitization. At this point, 42 patients underwent endoscopic reevaluation and 71% (n=30) had clinical and histological resolution. Those who had clinical and histological regression with dietary recommendation where 52% (n=22). No statistical significance (p-value>0.05) was found when elimination diet was recommend, associated or not to pharmacological treatment.

**Conclusion**

Atopic diseases and food sensitization prove to be very common in patients with EoE. Our study may suggest the doubtful role and benefit of elimination diet when food sensitization is documented, though more studies are needed. The management of EoE requires a multi-disciplinary approach with regular clinical and endoscopic surveillance to prevent complications.

**P07 Eosinophilic Oesophagitis And Allergy: We Need A Task Force**

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**Keywords:** Eosinophilic Oesophagitis, Allergy, Skin Prick Test, IgE

**Introduction**

Treatment of Eosinophilic oesophagitis (EoE) includes oral corticosteroids and restrictive diets. It seems useful to complete diagnostic tests of all the proteins involved in hypersensitivity to allow better-targeted dietary restrictions. Furthermore, plant-food allergy is the most commonly found food allergy and Lipid Transfer proteins (LTPs) are plant allergens that have mainly been considered clinically relevant in plant-foods but have also been described in pollens.

The aim of our study was to perform a retrospective analysis of patients who received a diagnosis of EoE at our “Pediatric Digestive Surgery-Allergy joint ambulatory”.

**Methods**

Inclusion criteria were the histological diagnosis of EoE over the period 1st January 2015-30th November 2016. For each patients the results of a standard series of Skin Prick Test (SPT) for aeroallergens and foods were analysed; specific IgE were evaluated when performed. The available data on specific IgE to LTPs from peach (Pru p 3), hazelnut (Cor a 8), peanut (Ara h9), apple (Mal d3) were also analysed. Levels of IgE>0.35 kU/L were considered positive.

**Results**

A total of 37 patients (24 Male; median age 8.53 years; 32 out of 37 not responder to proton pump inhibitor) were retrospectively analysed. All patients involved in the retrospective analysis preformed Skin Prick Test, while 21 out of 37 patients (56.7 %) performed specific IgE evaluation.
Only 4 out of 37 (10.8 %) patients resulted completely negative for food or aeroallergens. Combining the results of SPT and specific IgE we can summarize that: 12/37 and 15/37 patients were negative for aeroallergens and foods respectively; 9 and 12 were positive for 0-2 aeroallergens or foods respectively and 16 and 10 subjects were positive for more than 2 aeroallergens or foods respectively. Fifteen patients perform LTPs analysis: 10/15 (66.7%) resulted negative for all tested LTPs, while 3 subjects showed positivity only for Pru p3 and 2 patients for Pru p3, Cor a 8 and Ara h9.

**Conclusion**
The results of the study show a high prevalence of positivity for several allergens. Furthermore, these preliminary data seem to demonstrate that LTP-syndrome can be present also among EoE patients in about 30% of them. These data thus suggest that all EoE patients should be evaluated from an allergological point of view. In this context many efforts of cooperation between paediatric gastroenterologist and allergist should be provide.

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**P08 Refractory Case Of Eosinophilic Esophagitis In A 5 Year-Old Girl. Presentation Of A Case Report**

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**Case description**
S is a 5 year old girl. She was born by C-section delivery after an uncomplicated pregnancy at 34 weeks’ gestation, eutrophic. Bottle fed from birth. At one month-age she presented persistent vomit and reflux symptoms despite changing formula and anti-reflux medical treatment. At 18 months she presented severe gastroesophageal reflux and haematemesis. An endoscopic study revealed duodenal ulceration and eosinophilic oesophagitis: distal oesophageal mucosa with a significant infiltrate of eosinophils (up to 22/hpf). Allergy symptoms are positive for mild eczema, controlled asthma (cough and intermittent wheeze) and rhinoconjuntivitis (snoring and intermittent itchy eyes). Skin prick tests negative for food and environmental allergens, and only revealed low sensitisation to cat, which she’s exposed to at home. She was put on to four and six food elimination diet, with poor response so she was put on elemental formula exclusive diet. Growth and development remain unaffected. Despite elimination diet and two courses of oral budesonide she has remained both symptomatic (abdominal pain and vomit) and endoscopic findings show persistent eosinophil-predominant inflammation. She has only experienced improvement to oral prednisolone. Whereas most children respond to elimination diet and/or the use of enteral steroid, this case illustrates a refractory case. Current evidence for frequent relapse or poor respond include alternative treatment options such as longer course of topical steroids, higher doses of topical steroids and systemic steroids. There are few data to support the use of mast cell stabilizers or leukotriene inhibitors, as well as the use of immunosuppressant and biologic therapies.
Clinical, Endoscopic And Histopathological Characteristics Of Pediatric Patients With Eosinophilic Digestive Diseases Attending The Gastroenterology Department Of The National Institute Of Pediatrics In Mexico City.

Amyra Ali Azamar Jácome, Mónica Rodríguez González, David Alejandro Mendoza Hernández, Josefina Monserrat Cázarez Méndez

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Keywords: Eosinophilic Esophagitis, Eosinophilic Gastroenteritis, Eosinophilic Colitis, Eosinophilic Digestive Diseases, Pediatrics

Introduction
Eosinophilic digestive diseases (EDD) are relatively rare disorders associated with increased gastrointestinal eosinophilic infiltrates without any underlying primary etiology. The pathogenesis of EDD remains unclear, but is suspected to be related to hypersensitivity reaction given its correlation with other allergic disorders and clinical response to steroid therapy. The objective of this study was to describe the clinical and paraclinical profile of pediatric patients with EDD.

Methods
We conducted a retrospective, observational, transversal and descriptive study, in which we reviewed every histopathological report of patients who underwent endoscopy and/or colonoscopy in the Gastroenterology department of the National Institute of Pediatrics in Mexico city from January 2014 to December 2016. EGE was defined by biopsies showing eosinophilic infiltration of at least 20 eosinophils per high power field, according to Talley criteria, of one or more areas of the digestive tract and its association with gastrointestinal symptoms. Patients were excluded if there was evidence of parasitic or Helicobacter pylori infection, inflammatory bowel disease or any extraintestinal disease, such as vasculitis, hypereosinophilic syndrome or oncologic disorders. Socio-demographic data and information concerning atopy, allergies, symptoms, laboratory findings (IgE and peripheric eosinophils levels), allergy tests, endoscopic and other histopathological findings, and treatments were searched in the clinical files and registered.

Results
EDD were diagnosed in 29 patients. Average age was 6.5±1.2, being more frequent in males (2:1). Of these, 3 were associated with other autoimmune diseases. Of the remaining 26, 5 had documented food allergen sensitization, either by prick test, specific IgE or patch test. However, 12 patients were diagnosed with cow's milk allergy. Eosinophilic duodenitis was the most common EDD affecting 14 patients (41.3%), followed by eosinophilic proctocolitis with 8 (27.5%) and eosinophilic esophagitis with 6 (20.6%), eosinophilic gastroenteritis was present in 2 patients (6.8%). 3 patients had combined forms of EDD.

Conclusion
EDD are poor studied entities. Like others, we found that the entire gastrointestinal tract could be affected. The exact number of eosinophils required for diagnosing EDD and the role of these in gastrointestinal tract are not known. More studies should be addressed in order to better understanding of this entity.
P10 Eosinophilic Oesophagitis Linked To Pollen Food Syndrome: A Case Report

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Keywords: Eosinophilic Oesophagitis, Pollen Food Syndrome, Oral Allergy Syndrome, Allergic Rhinitis, Food Allergy

Introduction
High incidences of aeroallergen sensitisation and pollen food syndrome amongst adults with eosinophilic oesophagitis (EoE) raise the possibility of involvement of aeroallergens in the pathophysiology of this condition, although the cause and effect is unclear.

Methods
A 38-year-old male presented with a 10-year history of dysphagia. EoE was confirmed histologically on oesophageal biopsy with a peak eosinophil count of 73 per high power field. Basal cell hyperplasia and eosinophilic microabscess formation were noted histologically as well as pseudo-trachealisation and linear furrows on oesophagogastroduodenoscopy (OGD). For 10 years he had consumed daily fresh fruit smoothies containing raw apple. Due to a history of pollen food syndrome and sensitisation to tree pollen, avoidance of raw fruit and smoothies was advised. No other dietary elimination was recommended. Three months later a repeat OGD and biopsy showed a complete histological response. Written informed consent was obtained from the patient for this case report.

Results
Regular exposure to pathogenesis related class 10 (PR-10) proteins from birch pollen cross-reactive foods appear to have been causative for this patient. PR-10 proteins are generally rapidly degraded by low pH and pepsin in the stomach, which may account for allergic inflammation localised to the oesophagus. A detailed allergy-focussed diet history should include exposure to relevant allergens, particularly in blended or liquid foods, with which the effective oesophageal allergen exposure may be greater than intact foods.

Conclusion
Cross-reactive foods, particularly the PR-10 family, should be considered as targets for exclusion diets in EoE. Although the role of testing for food-specific IgE responses in EoE remains controversial, investigation of pollen-food cross-reactive antigen sensitisation may have a role in the context of a suggestive clinical history.

P11 Eosinophilic Esophagitis In Mediterranean Spain: Regional Characteristics And Clinical Evolution Of Paediatric Patients

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Keywords: Eosinophilic Esophagitis, Children, Sensitization

Introduction
EoE is an emergent disease with variations according to age and geographical region. Our aim was to investigate children with EoE for clinical characteristics, prevalence of sensitization and therapeutic response in Mediterranean Spain.

Methods
Prospective, real life study, in Sant Joan de Déu Hospital, Barcelona. Subjects ≤18 years, diagnosed with EoE (EAACI criteria 2011) from 2012 to 2016. Allergy testing with skin prick test (SPT) to aeroallergens and most frequently implied foods for EoE in our region was performed (wheal diameter ≥1mm were positive), as were specific IgE to molecular allergens by ImmunoCAP ISAC microarray (cut-off ≥0.3 ISU). Treatment response was considered if the patient showed histologic remission. Patients followed hospital protocol (approved by ethics committee) starting treatment with proton pump inhibitor (PPI), second line exclusion diets and finally swallowed steroids.

Results
There is a growing incidence of EoE, 11 patients in 2003 to 102 in 2016. Median age of diagnosis 10 years. Males 83%. Most common symptoms were dysphagia 57.8% and impaction 44.2% regardless of age. Family history of atopy 41% and EoE 8%. Personal history of atopy 87.5% (Respiratory 71.2%, Food allergy 34.3%). Sensitization by SPT was seen in 93% (aeroallergens 82 % and food 79%). Main aeroallergen by components (n=51), Derp1-Derp2 63%, food storage proteins 30%, milk 26% (Bos d4, d5, d8) and cross reactivity 22% (LTP). Endoscopic findings were mainly inflammatory (exudates 70%, furrows 64%). Three patients had stenosis. Throughout treatment, 34% were PPI-responsive. Dietary therapy was followed by 62 patient but not all families agreed to complete the exclusion diet protocol. Dietary restrictions varied during evolution. Milk exclusion was effective in 30% (4/13), milk + gluten 20% (4/20), 4-food 10% (2/21), 6-food 28 % (6/22), SPT-directed + milk 66% (6/9), elemental 86% (6/7). If dietary treatment failed or families refused to continue, patients began steroids. Swallowed budesonide was effective in 89% (24/30). Two patients presented secondary esophageal candidiasis. No specific sensitization pattern was seen in PPI- responders.

Conclusion
EoE prevalence is rising. There is a wide range of sensitizations, mostly aeroallergens and panallergens to vegetable proteins. Approximately a third of children were PPI-responsive. SPT-directed + milk exclusion was effective in our clinical practice. Steroids are an effective therapy but need to be monitored for complications.

P12 A Natural Red Pigment As A Hidden Allergen In Eosinophilic Oesophagitis: Carmine-Induced Food Allergy

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Keywords: Carmine, E120, Cochenille

Background Carmine (E120) is a red dye extracted from dried female cochineal arthropods (Dactylopius coccus cacti) commonly used in foods, drugs and cosmetics. Reports of IgE-mediated carmine allergy are limited.

Report A 5-year old boy presented at the outpatient clinic because of complaints of reflux and rumination of food until 2 hours after dinner. Radiographic evaluation was negative. Coeliac disease was excluded serologically. A peripheral eosinophilia of 8% (0.9 10^9/L) was present. Endoscopic evaluation showed reflux oesophagitis grade B with biopsies showing eosinophilic oesophagitis (EoE). Proton pump inhibitors (PPI) were initiated in combination with a cow’s milk free diet because of a positive immunoCAP (Phadia) for cow’s milk (0.38 kU/L). During the following months, he had no complaints, and this positive evolution was confirmed by absence of eosinophils in the oesophageal biopsies. However, 7 months later, still under PPI treatment and cow’s milk free diet, he again experienced abdominal pain and some rumination of food. The immunoCAP for cow’s milk became negative. An endoscopy performed 5 months later, one month after discontinuation of PPI, and with minor complaints, showed eosinophils both in proximal and distal oesophagus (peak 25/HPF). PPI was reinitiated. Re-evaluation 2 months later showed absence of eosinophils in the oesophagus, and the cow’s milk free diet was stopped. Surprisingly, 2 months later, in absence of any complaints, follow-up endoscopy was macroscopically normal but showed distal esophageal eosinophilia (130/HPF). Allergologic work-up was then initiated: skin and immunoCAP testing were negative for all tested food allergens with exception of a positive skin prick test for a red colored drink containing E120, confirmed by a positive immunoCAP for cochenille (1.01 kU/L). A diet free of E120 (carmine, cochenille red) was advised. Re-evaluation is planned within 12 weeks.

Clinical relevance of the report As to our knowledge, this is the first report about a potentially causal association between IgE mediated sensitization to carmine and eosinophilic oesophagitis. Multidisciplinary follow-up of patients with EoE is crucial.

P13 EOSINOPHILIC ESOPHAGITIS - THE IMPORTANCE OF FOOD RESTRICTION

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Keywords: Eosinophilic Esophagitis, Food Restriction,

Introduction The eosinophilic esophagitis (EE) is a chronic inflammatory disease, with an immunological component. The relation with food allergy has been reported in a crescent number of studies, demonstrating the key role that food restriction has on symptomatic improvement in these patients.
Methods
Retrospective analysis of clinical records of pediatric patients diagnosed with EE, confirmed histologically in our hospital from 2009 to 2015.

Results
7 cases of EE were diagnosed, with an average age of 14.5 years. The number of male patients was superior (n=6). The presenting symptoms were dysphagia and food impaction in all patients, with mean age of presentation at 12.5 years. Patients underwent upper gastrointestinal endoscopy, and the biopsies revealed in all patients, the presence of numerous eosinophils (>15 per high power field) in the lamina propria and in transepithelial migration. There was an increase of total IgE (172-877 kU/l) in 4 patients, 3 of whom had positive phadiatop to inhalant allergens. The inhalant allergens were negative in the remaining patients. Food allergens and specific IgE for food were negative. Skin tests (milk, egg, soy, wheat, peanuts, hake, shellfish) were positive for wheat in just one patient, all the others were negative.
It was empirically established a restrictive diet in 2 patients, since there was no clinical improvement with drug therapy alone (fluticasone 500μg bid). The exclusion of cow's milk, beef, egg and soy in a patient’s diet and cow’s milk, soy and egg on another patient’s diet resulted in a significant clinical and histological improvement.

Conclusion
EE pathogenesis appears to be related to atopy, and its control should include a dietary component as an addition to the pharmacological therapy instituted. Although skin tests may be negative, dietary restriction of certain foods can improve symptoms and histology in these patients.

P14 Recurrent Asphyxia As An Atypical Presentation Of Eosinophilic Oesophagitis

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Background Eosinophilic esophagitis is an important differential diagnosis in the field of dysphagia and acute food bolus impaction due to its major long-term consequences.

Report A 22-year old male with complex mental and physical developmental disorders (Opitz BB syndrome), including tracheomalacia, was referred to our clinic because of at least 7 episodes of acute asphyxia while eating. His parents observed a change in facial expression, erythema of the face, wet eyes, while he was asking for help. Heimlich maneuver was needed several times over the past years. Clinical diagnosis was hampered by his mental disability but associated asphyxia was clinically obvious. Extensive evaluation in another hospital concluded oropharyngeal dysphagia partially due to retrognathia for which an advancement osteotomy of the mandible was performed, unfortunately without clinical benefit. He also followed speech and language therapy with exercises for better mobilization of the tongue, however, again without clear effect on the episodes of asphyxia. High-resolution esophageal
manometry demonstrated no abnormalities of the upper oesophageal sphincter, but revealed delayed relaxation of the lower oesophageal sphincter in 1/5 swallowing acts, with intermittent distal esophageal stasis of the bolus. However, gastroscopy showed a narrow caliber and crepe-paper oesophagus (paper thin mucosa, fragile upon biopsy) with subtle furrows (longitudinal ridges) raising a high clinical suspicion of eosinophilic oesophagitis (EoE). A dilatation with Savary bougies was performed to a diameter of 45-48-51 French. Biopsies showed elevated numbers of intra-epithelial eosinophils (maximal 25/HPF) in esophageal biopsies. Proton pump inhibitors were started, however without effect on eosinophilic infiltration and symptoms, confirming the diagnosis of an underlying EoE. Allergologic evaluation for food allergy, including skin prick testing and immunocap (Phadia) testing, was negative. Oral budesonide solution was started and patient clearly improved with respect to appetite and speed of eating. He did not present anymore with periods of severe asphyxia, only minor episodes of choking based on the oropharyngeal dysfunction.

**Clinical relevance of the report** Even in presence of different other potential causes of dysphagia and asphyxia, EoE should still be excluded and treated if present. This can contribute to a better life quality of patients.

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**P15 Eosinophilic Esophagitis And Topical Corticosteroids: In Search Of A Minimum Effective Dose**

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**Introduction**

Treatment guidelines of Eosinophilic Esophagitis (EoE) advocate the use of topical corticosteroids (TCS) alongside dietary measures. Specific formulation, dosage and duration of treatment with TCS are not well established in literature. Objectives: To assess the efficacy of TCS on EoE treatment and evaluate disease’s progression according to its suspension or dose reduction.

**Methods**

We performed a retrospective analysis of patients diagnosed with EoE between 2006 and 2015 who were treated with TCS. Treatment baseline was swallowed fluticasone propionate [PF] 500 mcg bid, administered through a pressured metered dose inhaler, for a minimum duration of 3 months.

We evaluated efficacy defined as clinical and histological resolution as well as disease evolution, taking into account treatment suspension or maintenance.

**Results**

Of 53 patients with EoE who started treatment with TCS, 47 who kept follow-up were analysed. Of these, 37 were boys. Median age of symptom onset was 8 years (minimum 6 months, maximum 15 years), and median age of diagnosis was 8.4 years (minimum 2 years, maximum 17 years). Clinical and histological resolution were achieved in 94% (n=44). Treatment suspension in the latter group (n=34) held a
relapse rate of 100%. In 10 patients, daily dose reduction was attempted. In 7 patients clinical and histological remission were maintained with lower dose, namely, PF 500 mcg/day in 4 and 250 mcg/day in 3 patients. In the other 3 patients who relapsed with PF 500 mcg/day, remission was once again achieved after up-dosing to 1000 mcg/day.

**Conclusion**

TCS efficacy for EoE treatment is elevated and dose dependent, apparently. Our results suggest that it is possible to reduce maintenance dose in a significant number of patients.

In patients with EoE treated with TCS, minimum effective dose for disease control should be evaluated in order to reduce the risks of side effects without compromising disease control.