the most common allergen sensitizations in children with Allergic Rhinitis and Asthma in 4 different regions.

Methods: The study was performed on 461 children aged 5 to 15 years, from 4 different regions in Guatemala. A questionnaire was given to record information regarding family history of atopic disease and symptoms of Rhinitis and Asthma. The diagnosis was made in the presence of at least 3 symptoms of each disease. Scratch testing was performed using a commercially available device and a panel of 8 allergen extracts: Cypress Arizona, Dog, Cat, Deratophagoides farinae and pteronyssinus, Cockroach Mix, Mold Mix and Bermuda grass.

Results: Patient average age was 8.3 years, 55% male and 45% female. Patient distribution by region was 35% from Huehuetenango, 29% Chiapas, 18% Mazatenango and 18% Quetzaltenango. Family history of allergic rhinitis was present in 46% of patients, asthma in 51% and atopic dermatitis in 33%. The most common diagnosis was rhinitis in 86% of patients, 52% had asthma and 43%, both rhinitis and asthma. 98% had a positive Histamine Control and all a Negative Saline Control. 36% of patients had no allergy sensitization to allergens tested and 64% showed positive skin tests. The most frequent allergic sensitization was to Dermatophagoides pteronyssinus (44%) and farinae (43%), followed by Cockroach (28%). We also found less frequently, positive skin tests to grass (14%), Cat (14%), Mold (10%), Dog (8%) and Cypress (6%). The regions with higher dust mite sensitization were Quetzaltenango (51–55%) and Huehuetenango (45–51%).

Conclusions: The most common allergen sensitizations in children with allergic rhinitis and asthma in Guatemala are dust mites and cockroach. Family history of either rhinitis or asthma is present in a significant amount of patients (46–51%) with atopic disease and allergic sensitization, showing that it is an important risk factor in Guatemala. In 36% of patients in this study, allergic sensitization does not seem to contribute to their rhinitis and asthma symptoms.

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The Impact of Breast-Feeding Duration and Mode of Delivery on Allergic Rhinitis in Korean Children: Cohort of Allergic Rhinitis in Korea (Coar-korea) Study

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Background: There is much interest in the possibility that environmental factors may influence the risk of allergic rhinitis in early life. We investigated simultaneously the effect of mode of delivery and breast-feeding duration on the development of allergic rhinitis in Korean children.

Methods: Data from 878 children of Cohort of Allergic Rhinitis in Korea (COAR-Korea) Study were analyzed. Children with rhinitis were recruited from 14 centers located in 6 provinces of South Korea between April 2008 and September 2010. All subjects were divided into allergic rhinitis (AR) group and nonallergic rhinitis (NAR) group according to skin prick test response. Data on environmental factors, including mode of delivery and breast-feeding duration, were collected using a questionnaire. Relationships were analyzed using logistic regression analyses.

Results: We found that 77% of the population with rhinitis had AR, whereas 23% had NAR. Compared with never breast-fed, breast-feeding for ≥12 month was significantly associated with a lower prevalence of AR (aOR, 0.64; 95% CI, 0.41-0.99). Children who were born by Cesarean section showed a higher prevalence of AR compared with those born by vaginal delivery (OR, 1.48; 95% CI, 1.05-2.09). However, after adjustment for confounders under study, this difference was lost (aOR, 1.40; 95% CI, 0.90-2.20). Children born by Cesarean section were shown significantly lower rates of breast-feeding initiation (70.5% vs. 78.9%, P = 0.005) and lower rates of longer (for ≥12 months) breast-feeding maintenance compared with those born by vaginal delivery (35.5% vs. 48.4%, P = 0.005).

Conclusions: Amongst environmental factors, longer duration (for ≥12 months) of breast-feeding seems to be the most powerful protective factor against the risk of developing AR in young children. However, breast-feeding behavior seemed to be affected by mode of delivery and must be considered as a strong confounding factor in evaluating the correlation between environmental risk factors and development of allergic diseases.

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The Efficacy of a Nasal Corticosteroid Ciclesonide for the Treatment of Serous Otitis Media in Atopic Children

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Background: Since chronic inflammation is the histopathologic landmark of otitis media with effusion, clinical observations led us to believe that the use of a Nasal Corticosteroid Ciclesonide may be more effective than an oral antibiotic in the treatment of serous otitis media in atopic children.

Methods: We studied forty pediatric patients (age 6–11 years) in a randomized open labeled 2-week trial to compare the efficacy of the nasal corticosteroid Ciclesonide 50 mcg/nostril 2 sprays per nostril once a day to an oral antibiotic Amoxicillin/Clavulanate potassium (90 mg/kg/day in 2 divided doses every 12 hours) for the treatment of otitis media with effusion. The efficacy of the treatment options was assessed using pneumatic otoscopy, impedance tympanometry and audiometry to monitor the clinical course of the middle ear effusion in both treatment groups.

Results: In the group nasal corticosteroid Ciclesonide a resolution of otitis media with effusion occurred at the 8th day. In contrast in the group treated with the oral antibiotic the resolution of otitis media with effusion occurred on the 14th day.

Conclusions: In conclusion, the nasal corticosteroid Ciclesonide is more effective than an oral antibiotic. The nasal corticosteroid Ciclesonide may be a safer and shorter therapy given the safety issues with long term use of systemic antibiotics in atopic children.

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Combination of a Nasal Antihistamine Olopatadine and a Leukotriene Receptor Antagonist Montelukast Sodium for the Treatment of Seasonal Allergic Patients not Currently Controlled on Monotherapy Intranasal Antihistamine or a Leukotriene Receptor Antagonist

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Background: For seasonal Allergic Rhinitis (SAR) patients that remain symptomatic on an intranasal antihistamine, Olopatadine or a leukotriene receptor antagonist Montelukast sodium, the combination of intranasal antihistamine with a leukotriene antagonist Montelukast sodium may provide additional efficacy in sub-optimally controlled Seasonal Allergic Rhinitis Patients.

Methods: In this open 8-week trial 40 patients with symptomatic SAR currently using Olopatadine 1330 mcg/nostril or Montelukast sodium, 10 mg p.o daily were randomized to receive the combination Olopatadine 1330 mcg/nostril BID + Montelukast sodium, 10 mg p.o QD. The end points of the trial include: rhinomometry, nasal symptom score (composite score of nasal congestion, rhinorrhea, sneezing, post nasal drip, and nasal itching) and flexible rhinopharyngolaryngoscopy examination.

Results: Mean efficacy measurements at the end of the 8-week trial revealed significant improvements in all parameters examined in the combination treatment group compared to baseline measurements.
Conclusions: In conclusion, the combination nasal Olopatadine plus Montelukast orally is more effective than monotherapy nasal Olopatadine or Montelukast. It appears that in the combination treatment Olopatadine and Montelukast sodium, the primary end points (rhinomanometry and symptom scores) are significantly improved.

171 Augmentation of cxcl10 Expression in Nasal Fibroblasts Derived from Patients With Recalcitrant Chronic Rhinosinusitis Associated With Bronchial Asthma

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Background: The prevalence of chronic rhinosinusitis (CRS) that is refractory to traditional therapy appears to be increasing, and CRS that is refractory to traditional therapy tends to be associated with bronchial asthma (BA), especially aspirin-intolerant asthma (AIA). After viral infections, patients with CRS associated with BA usually experience exacerbations of their CRS symptoms, including nasal polyposis, in comparison with CRS patients without BA. Alternatively tissue fibroblasts as an important component of the epithelial mesenchymal trophic unit play a key role in maintaining tissue homeostasis and may also have the potential to contribute to disease pathogenesis through their contribution to inflammatory responses. On the basis of these findings, we hypothesized that CRS patients with BA are more susceptible to inflammation of the nasal and paranasal mucosa depending on the antiviral response of nasal fibroblasts.

Methods: Tissue specimens were obtained from the nasal polypos of 3 groups of CRS patients, a group that did not have BA (CRS-NA group), a group with aspirin-tolerant asthma (CRS-ATA group), and a group with AIA (CRS-AIA group). Nasal poly fibroblasts (NPFs) were isolated from the specimens and stimulated with poly I: C. By using a DNA microarray and performing a hierarchical clustering analysis we were able to identify a cluster containing genes that were up-regulated after poly I: C stimulation. To confirm the results of the analysis data, we used quantitative real-time PCR (qRT-PCR) and an enzyme-linked immunosorbent assay (ELISA).

Results: Expression of IFN-inducible protein 10 (IP-10)/CXCL10 transcript was higher in the NPFs of the CRS-AIA group and CRS-ATA group than in the CRS-NA group and control group. These findings were confirmed by qRT-PCR and ELISA.

Conclusions: The results of this study suggest that the increased poly I:C-induced CXCL10 expression in NPFs derived from the CRS patients with BA is involved in susceptible to T helper (Th1)-type immune response in the nasal and paranasal mucosa by viral infection compared with CRS patients without BA.

173 Relationship Between Allergic Rhinitis and Dental-Facial Abnormalities

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Background: Allergic rhinitis (AR) affects 10 to 25% of the general population and is of great importance for the impact on quality of life and school performance.1 Rhinitis has been associated with craniofacial abnormalities due to the high frequency of mouth breathing, oral breathing syndrome occurs when the child replaces the correct pattern of breathing caused by nasal obstruction resulting from allergic disease.2

Objective: To establish the type of relationship between allergic rhinitis and dental-facial abnormalities in the pediatric population of Veracruz ISSSTE Hospital General in 2009.

Methods: A case-control study, cases (25) were patients aged 6 to 18 years of age with allergic rhinitis. Controls (25) were entitled 6 to 18 years, informed consent, were referred to the dental service, where he underwent medical history and oral examination. For data analysis descriptive statistics were used, and chi-square test statistic (X2) and t test.

Results: The average age of cases was 12.5 ± 3.5 years, mean bodyweight 44.33 kg, age of controls was 12.6 ± 3.8 years, weight 48.23 kg. 16% of the cases has any oral habit (finger, tongue), in controls 36% assumed the habit. The predominant type of skull was normocéfalo controls (84%), where was dolichocephalic (63%). In dental abnormalities (dry lips, deep palate, malocclusion) 100% of cases had at least one, 90% have deep palate, in controls 32% had impaired and 24% with deep palate. We found a statistically significant difference P = 0.007, in the variable Inadequate Respirator Syndrome Nasal.

Conclusions: There is a partnership between the patient with allergic rhinitis and dental-facial abnormalities.