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**Gene polymorphisms of tumor necrosis factor α-308 and interleukin 10-1082 among asthmatic Egyptian children**  
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**Background:** Tumor necrosis factor (TNF) α-308 and interleukin (IL) 10-1082 have potent in inflammatory response that may including bronchial asthma.

**Objective:** Of this study was to check for association of polymorphisms related to cytokine genes with susceptibility and severity of bronchial asthma in Egyptian children.

**Methods:** Blood samples of 69 asthmatic children receiving treatment and follow up at Allergy and Respiratory Medicine Unit, Mansoura University Children Hospital, Egypt were subjected to DNA extraction and amplification using PCR with sequence-specific primers for detection of single nucleotide polymorphisms in the promoter regions of cytokine genes TNF-α-308 (G→A), IL-10-1082 (G→A).

**Results:** Compared to normal controls Egyptian asthmatic children showed significant higher frequency of IL-10-1082 G/G homozygosity genotype (P<0.0001, OR=7) with lower frequency of G/A heterozygosity genotype among cases. This finding was also detected in cases with persistent asthma and eczema. Whereas these cases showed significant lower frequency of TNF-α-308 G/G heterozygosity (P<0.05, OR=0.44). Male cases and cases with positive family history and persistent type of asthma showed higher frequency of G/G homozygosity.

**Conclusion:** These specific Egyptian cytokine gene polymorphisms may contribute to asthma susceptibility and severity of asthma among children. Separate studies should be specified relating these cytokine genotypes to response to various modalities in asthma therapy.

**Key words:** Gene Polymorphisms, TNF α-308 and IL 10-1082, Asthma, Egypt, Children.

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**Fungal spore, a potential source of occupational health hazard among the workers of potato cold stores in west Bengal, India**  
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Intense occupational exposure to a number of mould spores or their fragments for brief or prolonged periods may be responsible for serious health hazards. This had the case with the workers of the Potato Cold Stores in West Bengal. So the basic purpose of the present investigation was first to assess the qualitative and quantitative estimation of the aeromycoflora of the cold stores, to determine their allergenic potentialities to incite respiratory diseases among the workers and also deterioration of the food grains. Burkard personal Sampler and Andersen two stage sampler was used for this investigation. Diagnosis of respiratory allergic disorders was based on detailed medical history followed by skin-Prick test (SPT). A total of 20 fungal spore types were recorded during the survey period of two years (July 2005 to June 2007) with the dominance of Aspergillus niger (21.73%), Curvularia lunata (19.13%), Echinobotsyrium (15.96%), Alternaria alternata (13.06%), Fusarium solani (5.78%), and Rhizopus nigricans (2.45%) etc., from the store houses. Clinical investigation of the susceptible workers with the antigenic extracts of the six dominant spore types using Skin Prick test method clearly demonstrated their variable allergic potency. Among the 126 patients tested the highest positive reaction (2+ or more intensity) was noted in Aspergillus niger (26.98%) followed by Rhizopus nigricans (21.42%), Alternaria alternata (19.84%), Curvularia lunata (19.04%), Fusarium solani (18.25%), etc. Allergic symptoms were pronounced during monsoon and summer season or whenever, there was prolonged disruption of power supply. High frequency of positive response to SPT was due to an increased prevalence of allergic fungal forms in the working environment, which can be attributed to poor post-harvest storage and scientific management of the store houses. The results obtained showed that the work environment was considerably polluted with the spores of fungi of allergenic and immunotoxic properties, which cause a high degree of health risk to people employed in that area.

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Determination of total and specific IgE response in allergic rhinitis patients of Kashmir Valley-India

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Allergy accounts for a substantial number of human diseases with significant morbidity to patients. Kashmir valley has been witnessing an increase in allergy related disorders usually due to Aeroallergens present in the environment mostly during spring and autumn seasons. The present study was aimed at finding total and specific IgE responses in serum sample of 250 patients, reporting to various health centers across the valley with symptoms of seasonal allergy. Samples were first screened for the total IgE levels by a sandwich ELISA method. All the samples showed presence of high levels of total IgE (650–1200 iu/ml). Specific IgE levels were determined using grass and tree mix antigens by a two step capture ELISA method. After recording the concentration of total and specific IgE levels of 250 serum samples, 97 patients having severe symptoms of allergic rhinitis complaints were tested clinically by intra-dermal antigen skin test method for different allergens like pollen (18 types), insect (1 type), dust (5 types), fungi (5 types) and epithelia (2 types). 187 samples (74.80 %) out of 250 were reactive for the allergens used in the present study. Specific IgE ranged from 1.1–75.0 iu/ml representing moderate to high specific IgE levels. 63 samples not reactive to the allergens used above but had high total IgE levels were probably due to other allergens which are further being evaluated. The skin test reactions were interpreted and graded at 15 – 20 minutes as per the criteria of Shivpuri (1974).

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A study on association of pet ownership history and risk of asthma among Iranian children

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Background: The identification, isolation, and elimination of allergen(s) causing bronchial asthma are the most efficient aspect of treatment. The pet industry has diversified recently, increasing the risk of pet owners’ exposure to many unknown antigens.

Results: Of population studies have been contradictory and some epidemiological studies showed the risk of pet keeping, some even suggesting that keeping pets decreased the risk of sensitization and asthma.

Purpose: This study was to determine the association between pet ownership and asthma.

Methods: A case-control study was conducted among 215 asthmatic participants referred to Children Medical Center in Tehran in a 2 year period and were asked to reply a questionnaire in concerning to kind of pet, its sex and puberty, the place of keeping it, duration of keeping and the aim of pet keeping. Cases were recruited and matched (age and sex) with 215 healthy controls. Statistical analysis performed to calculate Odds Ratio (OR) of asthma morbidity in individuals who had kept pets.

Results: Odds ratio of asthma morbidity in patients who had kept pets was 2.59, CI=1.60–4.21 and P=0.001. Financial aim was the most reason of pet keeping (18.1%) and the most of pets were mature and were kept outdoor (41.7%). Pet keeping duration was less than 6 months (87.6%). No difference between genders was observed.

Conclusion: This study provides evidence that pet ownership is an important risk factor for asthma. We suggest that individuals who are at the risk of asthma (Atopic individuals) must avoid contacting with pets. However more research in this field in Iran is necessary.

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Health hazards in potato cold stores. Manas Ranjan Majumdar

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Occupational exposure to a number of mould spores and fragments for a brief or prolonged periods may be responsible for health hazards. Such has been the case with the workers of potato cold stores in West Bengal, India. The investigation was carried out to assess the qualitative and quantitative composition of air aeromycoflora of the store houses and then to determine their allergenic potentialities to incite respiratory or other allergic disease amongst the workers. A total of 22 fungal types were recorded during the investigation period for years (from August 2004 to July 2006) with the dominance of Aspergillus niger (21.73%), Curvularia lunata, (19.13%) Echinochloa ovinoca (15.96%), Alternaria alternata (21.73 %), Fusarium solani (5.78%) and Rhizopus nigricans (2.45%). Clinical investigation of the susceptible workers with the antigenic extracts of the six dominat spor types using Skin Prick test method clearly demonstrated their variable allergic potency. Among the 100 patients tested a high positive reaction (2+ or more intensity) was noted in Aspergillus niger (26.98%) followed by Rhizopus nigricans (2.45%), Alternaria alternata (19.84), Curvularia lunata, Fusarium solani (18.25%), etc. Allergic symptoms were pronounced during monsoon and winter season or whenever there were prolonged disruption of power supply. High frequency of positive response to SPT was due to an increased prevalence of allergic fungal forms in the working environment which can be attributed to poor post-harvest storage and scientific management of the store houses.

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Data inconsistencies in abstracts of research articles of three allergy journals

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Background: Recent studies have shown data inconsistencies between the abstract and full text of published papers.

Objective: The study was to determine data inconsistencies between the abstract and full text of articles published in three leading allergy journals.

Methods: All articles published in Clinical and Experimental Allergy, Journal of Allergy and Clinical Immunology and Allergy consecutively over six months from January 2005 that contained data in the abstract were checked against corresponding data in the body of the article.

Results: Of 96 articles in Clinical and Experimental Allergy, 33 contained data in the abstract inconsistent with those reported in, or absent from the body of the articles, giving an abstract data inconsistency rate of 35.4% (95% CI: 25.8–45.0). Corresponding abstract data inconsistency rates for the Journal of Allergy and Clinical Immunology and Allergy were 29.9% (95% CI: 20.3–39.5; 87 articles) and 24.3% (95% CI: 16.3–32.3; 111 articles) respectively.

Conclusion: About one-quarter to one-third of research articles in three leading allergy journals contained data in abstracts that were inconsistent with corresponding data in the article, or were not in the article.

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Prevention of signs and symptoms of cold urticaria by ebastine

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Cold urticaria is a frequent subtype of physical urticaria that is caused by the release of proinflammatory mast cell mediators after cold exposure, resulting in wheals and itching and sometimes in general systemic
Dermographic urticaria symptoms can be safely prevented by ebastine

Markus Magerl, Jan Schmolke, Frank Siebenhaar, Torsten Zuberbier, Martin Metz, and Marcus Maurer. Charité - Universitätsmedizin Berlin, Dermatology, Berlin, Germany. Physical urticaria includes a heterogeneous group of disorders characterized by the development of urticarial lesions and/or angioedema after exposure to certain physical stimuli. The most frequent physical urticaria is the dermographic urticaria (DU), in which shearing forces on the skin result in wheals and itching. Subsequent scratching aggravates the symptoms. Second-generation antihistamines are recommended as the first-line treatment, but to date only one has ever been tested for this condition. The aim of this study was to assess the safety and efficacy of ebastine in preventing DU symptoms. We administered 20 mg ebastine to seven adult DU patients in the scope of a double-blind cross-over trial. The safety of ebastine was sensitively assessed with a psychometric battery testing cognitive performance and mood. After challenge by shearing forces, wheal and erythema were assessed by the investigator and the intensities of pruritus and burning were rated by the subject. We could show that Ebastine had no negative impact on any of the parameters of cognitive performance or mood. Most importantly, cold urticaria symptoms were markedly reduced after challenge in the verum group, indicating that ebastine can effectively protect patients from cold urticaria symptoms. These results demonstrate the safety of ebastine and reveal its efficacy in treating patients with cold urticaria.
Aim: To define asthma phenotypes in asthmatic children based on the seasonal distribution and some clinical features of asthma exacerbations.

Methods: Object of research were 326 children with 1407 acute episodes treated at the Clinic of Pediatrics in the period between 2004 and 2006. Based on distribution of the exacerbation frequency throughout the year with two well-marked peaks in December-January and in June-July three phenotypes were defined: “winter” phenotype (WP) presumptive virus-induced obstruction in 145 children, “summer” (SP) phenotype (SP) in 82 children, and “non-seasonal” (persistent/ phenotype (NP) in 99 children.

Results: Children with WP showed significantly lower average age (6.8 years for WP versus 11.3 years for SP), dominating symptoms for respiratory infection (88 % for WP versus 31 % for SP), and lower frequency of atopy (in 32 % for WP versus 78 % for SP). The asthma onset in SP group of children was later (average age of 6.5 years) while in WP the onset was at average age of 4.1 years. WP and NP showed slower improvement of the obstructive syndrome and more manifested functional impairments after the treatment (FVC 61 % of the expected for WP and FCV 67 % of the expected for NP).

Conclusion: Based on seasonal distribution of asthma exacerbations three asthma phenotypes with different clinical features, course and treatment results were defined.

987 Risk factors leading to hospital admission in Iranian asthmatic children

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Background: Asthma is one of the most common chronic diseases in the world, leading to an increased rate of hospitalization. We performed this study to better understand the factors leading to admission among asthmatic children.

Methods: We performed a study among asthmatic children in a referral hospital for asthma and allergy in Tehran. Sixty-three cases were selected from asthmatic children admitted to the emergency room (ER) who still had an indication for ward or intensive care unit admission after primary treatment. Our control group was the asthmatic children discharged after primary treatment and patients who were referred to the asthma and allergy clinic (63 patients). Data were obtained by structured questionnaires filled out during clinical interviews.

Results: There was a significant difference in mean age (5 years for cases vs. 6 years for controls; p = 0.049), personal and familial allergic history (69.8 and 57.1% for cases vs. 34.9 and 36.5% for controls; p <0.01 and p = 0.02, respectively), history of recent respiratory infections (79.4% for cases vs. 49.2% for controls; p <0.01), hospitalization history due to asthma (57.1% for cases vs. 23.8% for controls; p <0.01) and regular use of inhaled corticosteroid (66.7% for cases vs. 33.3% for controls; p <0.01).

Conclusion: Our findings confirm most previous observations, suggesting that recent respiratory infections, hospitalization, personal or familial allergy, disease severity and lower ages are important factors leading to hospitalization. We also found that regular clinical follow-up, regular use of inhaled corticosteroids, higher IgE levels and O 2 saturation may lower the probability of hospitalization during asthmatic attacks.

988 Polymorphisms impairing histamine degradation moderate behavioural responses to food additive challenge

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Background: The relationship between artificial food colouring and benzoate preservative (AFCP) intake and behaviour has hitherto been contentious. We have previously shown in a population based DBPCFC study, an adverse effect of AFCP on parentally-rated behaviour of 3 year olds and have now confirmed the observations in 144 8–9 year olds and 153 3 year olds using objective measures of observed behaviours in a school setting. One potential mechanism is IgE independent histamine release from circulating basophils.

Methods: From the second challenge study we have genotyped the children using buccal cells and related findings to the magnitude of the behavioural response to challenge.

Results: Polymorphisms of catecholamine genes, COMT Val108Met and ADRRA2A C1291G, previously associated with ADHD, had no impact on responses but T939C and Thr105Ile polymorphisms of the histamine N-methyltransferase gene (HNMT) significantly (p=0.02 and 0.04 respectively) adversely affected responses to AFCP challenge.

Conclusion: HNMT polymorphisms impair histamine clearance and AFCP cause histamine release. The presence of HNMT variants in the brain provides a potential mechanism (and therapeutic target) to explain the effects we observed. Many environmental factors increase histamine including infections and many foods. This would explain the frequent claim that food intolerance and infections adversely affect behaviour in some children. This gene by environment interaction should be investigated in relation to AFCP induced urtica, asthma and other atopic conditions.

989 Serum specific IgE - is result enough?

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Background: In vitro determination of serum specific IgE (sIgE) is an essential diagnostic tool in allergy. Clinical analysis laboratories offer different methods / technologies to determine sIgE, in some cases with highly variable and poorly interchangeable results, concerning the different allergens. Rotation between different methods may compromise allergic patients follow-up, namely in those situations that may benefit from sequential sIgE determinations, as food allergy and specific immunotherapy efficacy evaluation.

Aim: To verify the availability of written information concerning the method used in sIgE determination in lab result reports from clinical analysis laboratories in Lisbon District.

Methods: During 2 months (April and May 2007), 3 Imunoalergologists collected serum sIgE result reports from the patients they observed. Reports from 50 different clinical analysis laboratories within Lisbon district were obtained and analysed. Labs that did not mention the method that had been used to sIgE determination were further inquired by phone, in order to get that information.

Results: Among the 50 reports analysed, only 13/50 (26%) specified the method that had been used, namely the immunoenzimatic (IE) method in 9 and the chemiluminescent (QL) method in 4. Among the remaining 37 labs, when later contacted by phone, we verified that 17/37 (46%) were using IE method, 14/37 (38%) QL and 6/37 (16%) were using both methods, according to the different allergens. In 27/50 laboratories (54%), “RAST” was used as synonym of sIgE.

Conclusion: We intend to alert to the generalized lack of written information concerning the methods used in serum sIgE determinations in the lab reports from Lisbon district laboratories. This lack of written information, the persistence of the incorrect use of the term “RAST” and the simultaneous use...
of both methods for different allergens reveal the unawareness of most laboratories concerning this important issue, which is urgent to amend.

990 Chronic urticaria - why are patients dissatisfied with treatment? Marcus Maurer1, Jean-Paul Ortonne2, and Torsten Zuberbier1. 1Universitätsmedizin Berlin, Department of Dermatology and Allergy, Berlin, Germany; 2Hôpital de L’Arche 2, Department of Dermatology, Nice, France.

Background: Chronic urticaria (CU) is a common skin disorder characterized by recurrent spontaneous outbreaks of itchy wheals and/or angioedema. Chronic urticaria has been shown to have substantial impact on patient quality of life, but little else is known about patient perspectives on CU and its treatment. In particular, it is not known whether patients actually follow guideline treatment, and if not, why not.

Methods: To address these questions, a survey was conducted via an online panel with 321 randomly selected, representative adults in Germany and France who were diagnosed with CU. The survey included the Skinex-29 questionnaire on quality of life and questions about treatment and patients’ relation to their physician. Treatment was compared with recommendations from the current GA²LEN/EAACI/EDF guidelines.

Results: The survey confirmed that CU has substantial impact on patient quality of life. Notably, half the respondents were only “somewhat satisfied” with their treatment of their CU and considered their physician only “somewhat knowledgeable.” Only 64% of the respondents were using prescription medications as recommended by guidelines. Notably, 62% of respondents reported that they avoid seeing their physician unless absolutely necessary.

Conclusion: This survey implies that physicians either do not fully understand the experience of many of their patients with CU or are not building trustworthy supporting relations with them. Physicians need to talk with these patients more about how the condition impacts their lives and feelings in order to improve their compliance with treatment guidelines.

991 Lidocaine/prilocaine-treated skin modulate allergic inflammation induced by skin prick test
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Background: There are evidences that peripheral nerves contribute to the pathophysiology of many dermatologic diseases. The effects of neurogenic inflammation in allergen-induced skin prick test reaction are not clear and no study has been measured the effect of inhibition of peripheral nerves on all inflammatory skin signals induced by skin prick tests.

Objective: The purpose of this study was to investigate the anti-inflammatory effects of lidocaine/prilocaine cream on histamine and allergen-induced skin inflammation.

Methods: Skin prick tests using histamine and allergens were performed in 48 subjects on lidocaine/prilocaine and vehicle-treated skin. Volume, temperature, erythema size and pruritus on skin test area have been determined and compared.

Results: The absence of functional cutaneous nerves has significant and similar effects on all qualities assessed (rubor, calor, tumour, pruritus) in both allergic and histamine-induced inflammation skin responses. Effects on hyperthermia were found to be mild, i.e. similar to those on wheel formation. Pruritus responses were unaltered or even enhanced in denervated skin.

Conclusion: Lidocaine/prilocaine-treated skin modulate allergic inflammation induced by skin prick tests.

992 A differential effect of two probiotics in the prevention of eczema and atopy
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Background: The role of probiotics in the prevention of allergic disease has not been clearly established, despite early reports that Lactobacillus GG halves the risk of atopic eczema at 2 years. This study aimed to determine whether probiotic supplementation in early life can prevent the development of eczema and atopy at 2 years.

Methods: Randomized double blind placebo controlled trial of infants at risk of allergic disease and their mothers. From 35 weeks gestation, pregnant women were randomized to take Lactobacillus rhamnosus, Bifidobacterium lactis or placebo daily until 6 months if breastfeeding, and their infants from birth to 2 years (n = 474). The infant’s period prevalence of eczema and point prevalence of atopy, using skin prick tests to common food and environmental allergens, was assessed at 2 years (n = 466).

Results: Compared to infants in the placebo group, those receiving Lactobacillus rhamnosus had a significantly (p=0.01) reduced risk of eczema (OR=0.47, 95% confidence intervals (CI) 0.26–0.84), but this was not the case for infants taking Bifidobacterium lactis (OR=0.88, 95% CI 0.53–1.49). There was no significant effect of Lactobacillus rhamnosus (OR=0.65, 95% CI 0.38–1.11) or Bifidobacterium lactis (OR=0.76, 95% CI 0.45–1.28) on atopy.

Conclusion: The protective effect we found for Lactobacillus rhamnosus against eczema but not atopy is consistent with findings from some other studies. The effect of probiotics on eczema may depend on the particular probiotic selected for use.

993 Sublingual Immunotherapy with Honeybee venom reduces large local reactions: a randomized, double blind controlled study
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Introduction: Hymenoptera venom immunotherapy (VIT) is highly effective, since it confers a clinical protection against hymenoptera sting, including honeybee (HB) in about 90% individuals (1). The effectiveness of VIT can be easily demonstrated by the reduction of the intensity and size of large local reactions (LLR)(3, 4). VIT is currently given only by subcutaneous injections. Sublingual immunotherapy (SLIT) proved effective and safe in respiratory allergy, therefore its use in hymenoptera allergy can be hypothesized. We aimed at evaluating the clinical efficacy of SLIT with HB venom in beekeepers or their family members, by assessing the effect on LLR to HB stings. LLR was chosen as evaluation parameter for safety reasons, as this is a pilot study.

Methods: This was a randomised, double blind, placebo controlled study. Patients with LLR due to HB sting and skin tests/CAP-RAST assay solely positive to HB were enrolled. They were randomised to receive either HB SLIT (15 patients) or undistinguishable placebo (15 patients) for six months. The HB SLIT (Anallergo, Florence, Italy) involved a 6-week build-up, followed by a maintenance phase where 400 mcg were given monthly. LLR on HB sting were measured before SLIT and after no less than 3 months of
Mometasone furoate nasal spray effectively treats the ocular symptoms of seasonal allergic rhinitis in patients with all degrees of severity over 24 hours

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Background: Mometasone furoate nasal spray (MFNS) has been shown to be effective in controlling the nasal symptoms of seasonal allergic rhinitis (SAR). An analysis of subject-reported symptom data in MFNS trials was performed to determine the impact of MFNS on ocular symptoms. This analysis evaluated the effects of MFNS on SAR patients with varying degrees of symptom severity and differences in symptom reduction in the morning (AM) and evening (PM).

Methods: A retrospective analysis was conducted of data pooled from four randomized, double-blind, placebo-controlled clinical studies (three 2-week; one 4-week) with similar protocols that compared the effectiveness of MFNS 200 mcg QD and placebo in controlling ocular symptoms in subjects aged ≥12 years with a ≥2-year history of SAR. The analysis reviewed change from baseline over a 15-day period in symptom scores for eye tearing, itching, and redness on a 3-point scale (0: none; 1: mild; 2: moderate; 3: severe) and calculated total ocular symptom score (TOSS).

Results: The effect size of the Days 1–15 average for subjects with mild, moderate, or severe symptoms at baseline was compared, and TOSS was evaluated approximately 12 hours postdose (PM) and on arising, approximately 24 hours postdose (prior to dosing on next day, AM).

Results: Subjects in the MFNS (n = 491) and placebo (n = 492) groups had similar baseline clinical and demographic characteristics. The mean baseline TOSS was 4.35 (PM 4.39; AM 4.32) for the MFNS group and 4.5 (PM 4.60; AM 4.43) for the placebo group. The decrease in TOSS with MFNS for the Day 1–15 interval was -19.8% vs -5.6% for placebo (P < 0.001); the difference reached statistical significance at Day 3. For the same time period, scores for tearing decreased by -22.2% with MFNS vs -13.9% with placebo (P < 0.001), for eye itching by -17.3% with MFNS vs -12.3% with placebo (P = 0.002), and for redness by -15.7% with MFNS vs -8.3% with placebo (P = 0.002). For the mild, moderate, and severe symptom groups, the improvements in TOSS with MFNS over placebo were 0.30, 0.42, and 0.50, respectively. Reductions in individual symptom scores were significantly greater with MFNS than with placebo in both the PM (P < 0.006) and AM (P ≤ 0.001). Importantly, differences in TOSS between MFNS and placebo in the PM (0.36) and AM (0.43) were similar.

Conclusion: MFNS reduced ocular symptoms of SAR over 24 hours regardless of subjects’ baseline symptom severity.

Shrimp allergy: effect of vinegar soaking on allergenicity

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Background: Previous studies demonstrated the muscle protein tropomyosin as the major shrimp allergen. This allergen, Sa-II, was shown to be a 34-kDa protein - rich in aspartic and glutamic acids. Heat-stability of this allergen has been documented. However, no studies have shown yet the effect of vinegar on this allergen. This study aimed to demonstrate if vinegar soaking prior to cooking would have an effect on shrimp allergenicity, based on skin test results.

Methods: Eighteen shrimp-allergic and eighteen non-shrimp-allergic pediatric patients were subjected to skin prick test using conventionally-prepared shrimp extract. Mean wheel diameters obtained were compared to mean wheel diameters obtained using 3 experimental shrimp extracts prepared with preliminary vinegar soaking. For the adult group, twenty-six shrimp-allergic and twenty-six non-shrimp-allergic patients were included.

Results: Mean wheel diameters obtained using shrimp extract prepared with preliminary vinegar soaking were significantly smaller than mean wheel diameters obtained using conventionally-prepared extract. Wheel diameters obtained for shrimp-allergic patients were significantly bigger than wheel diameters obtained for non-shrimp-allergic individuals. Results were similar for pediatric and adult patients.

Conclusion: Results indicate that vinegar soaking prior to cooking can reduce shrimp allergenicity. With resources, further validation of results using double-blind placebo-controlled food challenges would be ideal.

996 Mometasone furoate nasal spray improves symptoms of perennial allergic rhinitis in children and adults in Peru

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Background: Perennial allergic rhinitis (PAR) is a highly prevalent disease globally and is the most common chronic disease in children. Nasal obstruction and other bothersome symptoms of PAR need to be treated year round. Previous studies have shown the intranasal corticosteroid mometasone furoate nasal spray (MFNS) to be well tolerated and clinically effective in relieving the symptoms of PAR. A study was conducted to assess effectiveness of MFNS and patient satisfaction with treatment in pediatric and adult subjects.

Methods: In this prospective, open-label, multicenter study, 33 Peruvian subjects (age 8 to 69 years) with clinically diagnosed PAR recorded nasal symptom data in a diary. Total nasal symptom score (TNSS) was evaluated at 15 and 30 days. Subjects also rated satisfaction with treatment, and the investigators evaluated adverse events.

Results: Thirty-three subjects (61% female, 39% male) received MFNS 100 or 200 mcg QD (pediatric or adult dose). Their mean TNSS was reduced from 10.7 (± 2.9 SD) at baseline to 4.1 (± 2.9 SD) at 15 days and 1.6 (± 2.2 SD) at 30 days (P < 0.001 for both reductions). At days 15 and 30, 25 subjects (76%) and 31 subjects (94%), respectively, rated themselves as satisfied or very satisfied with treatment. Mild adverse events (nasal irritation, sneezing, epistaxis, and cough) occurred in 7 (21%); one subject stopped treatment due to nasal irritation.

Conclusion: Mometasone furoate nasal spray 100 or 200 mcg QD safely and effectively improved symptoms of PAR in children and adults.

997 Effect of postoperative mometasone furoate nasal spray on wound healing following endoscopic sinus surgery

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Background: Chronic sinusitis and nasal polyposis are diseases of the nasal and sinus mucosa that affect approximately 15% and 4% of the population, respectively. Functional endoscopic sinus surgery (FESS) is standard surgery...
Mometasone furoate nasal spray reduces symptoms and improves quality of life in Chinese children with allergic rhinitis

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Background: Approximately 40% of children and adolescents in China suffer from symptoms of allergic rhinitis (AR). Effective treatment of AR in children is important in minimizing or preventing behavioral problems and poor academic performance and may help prevent the development of comorbid disorders such as asthma, adenoidal hypertrophy, and otitis media with effusion. This study was undertaken to evaluate the effects of mometasone furoate nasal spray (MFNS) on clinical symptoms and quality of life (QoL) in Chinese children with AR.

Methods: A total of 273 symptomatic children aged ≥6 years and ≤12 years with documented seasonal or perennial AR were treated in an open-label study of MFNS 100 mcg QD for 4 weeks. Eligible subjects had a nasal stuffiness/congestion score ≥2 (on a scale of 0=no symptoms and 3=worst symptoms) and a total nasal symptom score (TNSS) ≥8 (total of the individual symptom scores for rhinorrhea, congestion, nasal itching, and sneezing) at the start of treatment. The primary efficacy variable was a change in the TNSS, and the coprimary variable was a change in the individual symptom scores, while the secondary efficacy variables included overall efficacy and Pediatric Rhinoconjunctivitis QoL Questionnaire (PRQLQ) scores (assessing nasal and eye symptoms, behavior, and daily life).

Results: MFNS significantly (P<0.05) reduced TNSS from baseline (mean 9.16) after 1, 2, and 4 weeks of treatment (mean scores 5.41, 3.47, and 2.10, respectively). Significant improvements from baseline were observed at each week for all individual nasal symptoms. The percentages of patients achieving a 25% improvement (indicating at least moderate symptom reduction) from baseline in TNSS at weeks 1, 2, and 4 were 74%, 95%, and 96%, respectively. Moderate-to-complete symptom relief was reported by 71% of subjects at week 1 and 99% at week 4. Significant reductions (improvements) from baseline in total and individual PRQLQ scores were seen at weeks 2 and 4. Mean behavior PRQLQ scores decreased by a statistically significant amount from 13.99 at baseline to 5.70 at week 2 and 2.71 at week 4. Mean PRQLQ scores decreased from 8.30 at baseline to 3.12 at week 2 and 1.72 at week 4.

Conclusion: MFNS effectively relieved symptoms of AR, improved QoL, and was well tolerated in Chinese children with AR.
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The differences of clinical characteristics between childhood and adult allergic rhinitis patients in Asians: according to ARIA classification

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Background: The prevalence of allergic rhinitis varied across centres from 0.8% to 14.9% in the 6–7-year-olds and from 1.4% to 39.7% in the 13–14-year-olds. The recent guidelines of Allergic Rhinitis and its Impact on Asthma (ARIA) group, classified it as the frequency and severity may not be appropriate for the children age group. The present study evaluates the childhood and adult patients with the ARIA classification and analyzed the clinical features of each age group.

Methods: 1,375 subjects with allergic rhinitis diagnosed by skin-prick test at our hospital from December 2005 to July 2007 were included. These patients were classified according to age; babyhood(1–4 years), preschoolers (5–7 years), elementary schoolers (8–13 years), adolescents (14–19 years), young adults (20–35 years), adults (36–55 years), middle age (55–64 years), old age (65 years).Clinical features including nasal obstruction, rhinorrhea, nasal itching, sneezing, postnasal drip(PND), ocular symptoms and sleep disturbance and the allergen was analyzed in each age group according to the ARIA classification.

Results: A similar distribution of the ARIA classification groups were shown among all ages; Mild & intermittent group 27.5%, moderate to severe & intermittent group 17.8%, mild & persistent 18.5%, moderate to severe & persistent 34.9%. There was a higher proportion of nasal obstruction(p=0.04) and PND(p=0.042) in babyhood & preschoolers compared to adults, but ocular symptoms(p=0.01) and sneezing(p=0.01) were shown more frequently in adults. PND, sleep disturbance, nasal itching showed no distributional difference between children and adults. For allergens, house dustmite(p=0.07) showed a higher proportion in children whereas grass(p=0.01) and weed(p=0.021) was more frequent in adults. Clinical features, IgE and serum eosinophile count showed no significant relationship in each age ARIA classification group.

Conclusion: Classification of the ARIA group into different ages helped to identify the different clinical manifestations among children and adults. A new treatment strategy taking children's clinical features into account is deemed necessary.

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Chronic idiopathic urticaria and autoimmune thyroid disease

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Chronic idiopathic urticaria (CIU) persists for longer than 6 weeks, with a not determined cause. One of the interesting clinical associations is between chronic urticaria with positive autologous serum skin test (ASST) and thyroid disease. CIU and chronic thyroiditis has not been completely investigated.

Methods: We studied 94 patients (65 female and 39 male; mean age 44.7 years; range 15–78 years) who had CIU and a history of thyroid dysfunction. Thyroid function was investigated by means of thyroid-stimulating hormone (TSH), FT3 and FT4 measurement and thyroid ultrasound. Thyroid antibodies (anti-thyroid peroxidase and anti-thyroglobulin), total serum IgE levels and ASST were performed in all patients.

Results: Antibodies to thyroglobulin and to peroxidase were positive in 26/94 patients (27.7%) with CIU and morphological or volumetric abnormalities of the thyroid gland by ultrasonography. All the CIU patients with autoimmune thyroiditis had a normal thyroid function, a negative ASST and a normal total serum IgE levels (74.3 +/- 14.9 IU/ml; normal value <100 IU/ml). Antibodies anti-thyroglobulin and anti-thyroid peroxidase were negative in 68/94 (72.3%) CIU patients, of which 44/68 (64.7%) had high total serum IgE levels (395.2 +/- 180.6 IU/ml) and a negative ASST. Four of the thirty four CIU patients (11.8%) with negative thyroid autoantibodies had a positive ASST and a normal serum IgE levels, while 16/68 (23.5%) patients had a multinodular goiter, ASST negative and normal value of total serum IgE levels.

Conclusion: We found a correlation between autoimmune thyroiditis and normal total serum IgE levels in CIU patients with ASST negative. High total serum IgE levels were found in CIU patients without thyroid disease. Thus, in CIU patients the tests to detect thyroid autoantibodies are relevant in particular in patients with normal value of total serum IgE levels. Further investigation of mast cell activation by thyroid antigens is incoming.

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Perioperative allergic reactions: a case of intraoperative anaphylactic shock

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The incidence published on perioperative allergic reactions is highly variable, fluctuating between 1:3.500 and 1:20.000 anaesthesias, with a mortality rate of 3 to 6%. During surgical procedures it is difficult to recognise an allergic reaction. Under anaesthesia, bronchospasm and hypotension are common and lacking in a set of symptoms typical of an allergic reaction, especially when they occur separately; if the response to treatment is effective, the symptoms are often not investigated and they are attributed to another cause. Furthermore, 10–14% of the reactions, primarily the most severe, affect just one system; and that too, leads to many cases not being diagnosed. Therefore, epidemiological monitoring of these reactions is required. This is a case of intraoperative anaphylactic shock: A 59-years old female scheduled for an abdominal hysterectomy due to uterine sarcoma; her
personal records showed no known drug allergies. General anaesthesia was induced without incidents. After 15 minutes, when beginning the surgical incision and coinciding with the start of intravenous infusion of the following drugs: cefazolin, ketorolac, ranitidine and ondasentron, a sudden severe bronchospasm appeared, followed by cardiovascular collapse with severe hemodynamic deterioration, which was treated immediately with i.v. corticoids and ephedrine without an effective response. The surgical procedure was interrupted and, now with suspicions of a possible allergic reaction, all of the drugs that were being administered were withdrawn, i.v. adrenaline was administered up to a total of 1 mgr., forcing fluid resuscitation with crystalloids and colloids. The shock was reversed in approximately 5 minutes. The surgical procedure resumed 20 minutes after the symptoms, with clinical stability subsequently maintained. The immediate study revealed a high serum tryptase level 30 minutes and 6 hours following the reaction, the allergy study showed a decidedly positive prick test for cephalosporins, and the intradermal reaction was positive for cefazolin. The diagnosis was anaphylactic shock due to the administration of cefazolin and hypersensitivity to cephalosporins.

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**Swimming in asthma increases the risk or improved respiratory functions in atopic patients**

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**Background:** This study designed to evaluate the role of swimming in mechanics of lung in healthy individual and patients with asthma.

**Methods:** A total 76 girls who take part in course of regular swimming session three day per week for eight weeks enrolled in this study. All of them completed International Study of Asthma and Allergy in Childhood written questionnaire and person who suspicious to asthma or other atopic diseases referred to allergist for more evaluation. Peak expiratory flow rate was recorded for participants at beginning, one hour after swimming and two months later.

**Results:** According to International Study of Asthma and Allergy in Childhood questionnaire 35.4% had asthma or other atopic diseases. Increase in Peak expiratory Flow rate more than 20% of personal best was seen in 21.9% after one hour swimming and in 27.6% after two months. Increased in Peak expiratory Flow rate was significant in healthy individual and asthmatic patients and obese but not significant in patients with allergic rhinitis or eczema.

**Conclusion:** Swimming in indoor chlorinated pool not only is less asthmogenic but also can improve lung mechanics in normal and asthmatic patients. Because breathing large volume of warm and moist air are good for lung. The serious health problem with chlorinated pools is too much chlorine uses to sanitize the water and don’t have adequate ventilation in indoor pool.