protected. ANOVA analysis evaluated differences among CAPs and in each CAP value among the 3 groups. MANOVA multivariate analysis evaluated differences in overall CAPs and the effects of age, gender, Mueller grade and stings number. A $P < 0.05$ was considered statistically significant. Data were analysed by ‘SPSS’ 13.0 (SPSS Inc., Chicago, IL). We called NS patients to check if they were stung after VIT discontinuation.

**Results:** We selected 84 NS, 72 SP3 and 76 SP5 patients. Specifically, YJ-IgE levels decreased during VIT, as CAPs are statistically different at 0, 3 and 5 ($P < 0.001$). Considering CAP levels at the first control (CAP3), NS patients presented lower values than SP3 patients ($P = 0.002$); no significant difference was found between NS and SP5 patients. At the last control (CAP5), CAP values of NS and SP5 patients were different ($P = 0.002$) as well as between SP3 and SP5 patients ($P = 0.014$). No significant difference was found between NS and SP3 patients. By MANOVA, IgE decrease was inversely correlated with Mueller grade ($P = 0.012$) and age ($P = 0.002$). We recalled all NS patients by phone, 7/84 (8.3%) patients related one well tolerated sting, as they did not develop any allergic reaction.

**Conclusions:** In everyday practice if a patient never stung during VIT fulfills the temporal criterion, but specific IgE are not negative, a decrease of IgE levels ranging from 57 to 70% in respect to baseline might be a satisfactory parameter for stopping VIT. As a further confirmation of our conclusions, even if not statistically significant, all not stung patients were clinically protected after VIT discontinuation.

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**Skeeter Syndrome, a Case Report and Literature Review**

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**Background:** The worldwide prevalence of allergic reaction to mosquito bites is unknown. Some patients who suffer from local reactions have also systemic symptoms.

**Methods:** A 3 year old female who suffered from mosquitoes bites in her left lower extremity, had a large local reaction with erythema, edema, itching, pain and blisters of 5 × 6 cm. It was accompanied by fever of 38.5°C and emesis. She had a positive skin prick test for *Aedes aegypti* with diagnosis of Skeeter Syndrome. The patient was treated with antihistamine during 10 days and analgesics for 3 days. She was given antihistamine treatment for 10 days and analgesics for 3 days.

**Results:** Skeeter syndrome is defined as a large local reaction induced by mosquito bites associated with systemic symptoms (fever and vomiting) with specific IgE for mosquito identified by skin testing. The primary management of Skeeter syndrome is prevention of mosquito bites, the use of repellents and protective clothing. It is also important the symptomatic management control of pruritus with the use of antihistamines or if necessary topical steroids. Overall children with Skeeter syndrome remain healthy, except for the recurrence of large local reactions to mosquito Stings.

**Conclusions:** The early recognition of Skeeter syndrome is important to give the right management and to prevent unnecessary diagnostic tests and treatments that can increase the risk of adverse reactions and costs.

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**Bee venom Immunotherapy with Standardized Extract, Two Case Communication and Clinical Progress**

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**Background:** Bee venom immunotherapy is a safe and effective treatment, indicated in patients with previous history of severe systemic reactions to bee venom, demonstrating successful desensitization in more than 90% of cases with standardized extract. Currently in Mexico there is no standardized extract commercially available for treatment, despite of having high activity of beekeeping and occupational exposure with at least 17,478 registered stings per year and an annually honey production of nearly 70 tons.

**Methods:** We present the clinical progress of 2 patients with history of severe systemic reactions to bee venom and occupational exposure, both with demonstrated sensitization by specific IgE and who underwent specific immunotherapy with standardized extract (ALK-US) reaching a maintenance weekly dose of 100 mcg (PLA2) for the last 4 years.

**Results:** Both patients suffered of accidental stings after reached the maintenance dose presenting mild local reactions to stings. Both patients had very different clinical course presenting a wide variety of adverse reactions during desensitization protocol; from mild local to generalized reactions all generally well tolerated allowed to reach the maintenance dose with successful desensitization proved by accidental exposure without severe systemic reactions.

**Conclusions:** Bee venom specific immunotherapy with standardized extract is a well tolerated and effective treatment preventing the development of life threatening reactions in sensitized patients. It is important to promote the use and availability of standardized extract in developing countries with poor safety measures and high occupational exposure.

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**Clinical Case. Bee Venom Anaphylaxis**

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**Background:** Skin testing remains the principal confirmatory test for sensitization to hymenopteranvenoms. Mechanisms on how venom induces vascular permeability in the skinfollowing intradermal testing are elucidated and how tolerance is induced followinghigh-dose venom exposure. For management, venom immunotherapy remains the most effective treatment. Use of immunotherapy in large local reactors to reduce morbidity is discussed. Baseline serum tryptase levels have been identified as one potential markerfor severe systemic reactions to a subsequent sting. Bee venom immunotherapy is effective in most patients immediately after the conventionalmaintenance dose has been reached. In the minority of patients who are not protected withthis dose, an increased maintenance dose will provide appropriate protection immediately after its achieved usually by 3 to 6 months withstandarizing protocols. Thus, the dosage of the maintenance dose seems to be the major factor affecting protection from re-stings rather than the accumulated venom dose or the durationon the Maintenance Dose. A rush protocol would be recommended if the patient’s risk of being stung againbefore standard immunotherapy could work wereconsidered high. Although immunotherapy is often administered by allergists, it may be delivered by any practitioner who is willing to observe the patientand treat anaphylaxis if it should occur.

**Methods:** A 17-year-old man reported being stung by a bee in his workplace. He had been stung several times before, with no clinical manifestations. This last time, he developed face edema, respiratory distress, dyspnea, vomiting receiving treatment with hydrocortisone. Some time later, he was stung another time, presenting more severe symptoms including dyspnea, stridor, altered mental status, hives, so he was taken to a local clinic where he received epinephrine, dextrose, was hospitalized 4 hours until clinical remission. How should his case be managed subsequently?

**Results:** Intradermal test was positive with a dilution 1:200000.
Conclusions: For patients with a clear history of anaphylaxis such as the one described in the vignette, information should be provided on avoidance and on the use of emergency treatment with epinephrine auto-injectors. Patients should be advised to carry an auto-injector and to wear a medical alert bracelet.

Urticarial Vasculitis After Bee-sting Therapy
June-Hyuk Lee, Sung Woo Park, An-Soo Jang, DoJin Kim, and Choon-Sik Park.

Background: Bee-sting therapy is one of the oriental traditional medical therapies. Some chemical components of bee venom have been known to have anti-inflammatory effects. Recently, traditional therapists use one chemical component (e.g. Apitoxin) for injection therapy using a syringe, instead of sting method with bee itself as to be known traditional method. 31-year-old woman had a lower back pain because of mild HIVD in lumbar spine for 5 months. She had bee-sting therapies for several times for 4 months. During this period, she didn’t have any side effects and pain was improved. Her back pain recurred 4 weeks ago and had bee-sting therapy again. The traditional doctor performed intramuscular injections of 1 mL of Apitoxin on her lower back muscle. After 4 days, reddish skin lesions and swelling developed on her legs and spread to trunk. She was transferred and treated with systemic corticosteroid and antihistamine.

Methods: Serum specific IgE and IgG were measured by immunoCAP for and skin biopsy performed accompanied with managements.

Results: High levels of specific IgG but negative of IgE to honey bee venom were observed by immunoCAP. Skin biopsy was revealed as an urticarial vasculitis.

Conclusions: We report the case that suspicious to be serum sickness with blood lead levels in serum, the levels of IL-4, INF-γ and IgG4 by ELISA, total IgE levels by chemiluminescence and lead in blood by spectrophotometry AA.

Results: We present the results of 33 patients (16 girls/17 boys) aged 8 ± 1.38. The main risk factors for allergy were current animal contact (66.7%), past animal exposure (60.6%) and passive smoking (51.5%). The predominant allergy diseases: rhinitis (97%), conjunctivitis (43.8%) and atopic dermatitis (33.3%). The allergens with the higher prevalence of responses were: thickets (91.2%) and grass (88.2%). The average blood lead level was 4.36 µg/dL ± 2.13 and median total IgE 660 IU/mL. We present the analysis of the levels of cytokines, total IgE and IgG4 according to the types of allergy, severity and frequency of the disease.

Conclusions: IgE levels according to the type of allergic disease, severity and frequency seem to be related to the balance IL-4/INF g. The IgG4 seems to be positively related to total IgE levels in rhinitis, conjunctivitis and dermatitis and negatively with Asthma and other allergies. No association was found between blood lead levels and total IgE.

468 Relationship of Blood Lead Levels with Total IgE in Teenagers with Environmental Exposure in Torreon Coahuila, Mexico
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Methods: We included 230 teenagers (105 females, 125 males) between 11 and 14 years of age, from a cohort of children evaluated for its history of lead exposure since 2000. Clinical diagnosis was performed to detect allergies; skin tests were applied for 47 common allergens in the region. IgE levels were quantified in serum by chemiluminescence and the blood lead levels by spectrophotometry AAS.

Results: The average blood lead levels in allergic group were of 4.86 ± 2.9 µg/dL and in the non-allergic group 5.1 ± 2.7 µg/dL. There were not gender differences between allergic group versus non allergic group, however, among the types of allergic diseases, a higher percentage of males had rhinitis, conjunctivitis and asthma, compared with the females. The blood lead level in males was significantly higher (5.61 ± 3.3 mg/dL) compared with females (4.22 ± 2.1 mg/dL) and the regression analysis between blood lead levels with total IgE was significant in males and not in females.

Conclusions: Gender differences observed appear to be explained by blood lead levels, however, we should consider the contribution of other variables in the model.

Levels of IL-4, INF-γ and IgG4 in Serum of Allergic Children within Areas of Risk of Lead Exposure in Torreon Coahuila, Mexico
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Results: We present the results of 33 patients (16 girls/17 boys) aged 8 ± 1.38. The main risk factors for allergy were current animal contact (66.7%), past animal exposure (60.6%) and passive smoking (51.5%). The predominant allergy diseases: rhinitis (97%), conjunctivitis (43.8%) and atopic dermatitis (33.3%). The allergens with the higher prevalence of responses were: thickets (91.2%) and grass (88.2%). The average blood lead level was 4.36 µg/dL ± 2.13 and median total IgE 660 IU/mL. We present the analysis of the levels of cytokines, total IgE and IgG4 according to the types of allergy, severity and frequency of the disease.

Conclusions: IgE levels according to the type of allergic disease, severity and frequency seem to be related to the balance IL-4/INF g. The IgG4 seems to be positively related to total IgE levels in rhinitis, conjunctivitis and dermatitis and negatively with Asthma and other allergies. No association was found between blood lead levels and total IgE.

470 Distinct Bet V 1 Related Proteins in Mung Beans: VIG R 1 and Cytokinin-Specific Binding Protein
Eva Gussle, MSc, Barbara Gepp, Gerlinde Hofstetter, Nina Balazs, Wolfgang Hemmer, Heimo Breiteneder, PhD and Christian Radauer, PhD.

471 IgE from Birch Pollen Allergic Patients Cross-reacts with Two Distinct Bet V 1 Related Proteins in Mung Beans: VIG R 1 and Cytokinin-specific Binding Protein
Eva Gussle, MSc, Barbara Gepp, Gerlinde Hofstetter, Nina Balazs, Wolfgang Hemmer, Heimo Breiteneder, PhD and Christian Radauer, PhD.