

Selections from international journals

Nahla M. Heshmat

Professor of Pediatrics, Ain Shams University

Pediatr Allergy Immunol. 2018;29(1):28-33.

Mepolizumab-a novel option for the treatment of hypereosinophilic syndrome in childhood.

Schwarz C, Müller T, Lau S, Parasher K, Staab D, Wahn U.

BACKGROUND: Mepolizumab was originally intended as a therapeutic agent for atopic asthma in adults, and consequently, little is known about its use in children. Up to now, corticosteroids have formed the basis of the initial treatment of hypereosinophilic syndromes and are shown to be effective in most patients. To analyze the effect of mepolizumab in children is the aim of this study. **METHODS:** We are reporting the experience of the effect of mepolizumab in 2 pediatric patients with hypereosinophilic syndrome that was not sufficiently controlled by other drugs. In addition, the literature regarding the treatment with mepolizumab in pediatric and adult patients is reviewed for the most important studies regarding safety and efficacy. **RESULTS:** Mepolizumab therapy showed in 2 pediatric patients with severe hypereosinophilic syndrome a safe and efficient therapeutic approach. No significant intolerances appeared. Furthermore, treatment with systemic corticosteroids was terminated, and therefore, severe side effects were avoided in our pediatric cases. **CONCLUSIONS:** Anti-IL-5 antibodies, which can be applied without substantial drug intolerances, are a new, safe, and effective treatment option for pediatric patients with hypereosinophilic syndrome.

J Allergy Clin Immunol. 2018;141(2):529-538.

Results from the 5-year SQ grass sublingual immunotherapy tablet asthma prevention (GAP) trial in children with grass pollen allergy.

Valovirta E, Petersen TH, Piotrowska T, Laursen MK, Andersen JS, Sørensen HF, Klink R; GAP investigators.

BACKGROUND: Allergy immunotherapy targets the immunological cause of allergic rhinoconjunctivitis and allergic asthma and has the potential to alter the natural course of allergic disease. **OBJECTIVE:** The primary objective was to investigate the effect of the SQ grass sublingual immunotherapy tablet compared with placebo on the risk of developing asthma. **METHODS:** A total of 812 children (5-12 years), with a clinically relevant history of grass pollen allergic rhinoconjunctivitis and no medical history or signs of asthma, were included in the randomized, double-blind, placebo-controlled trial, comprising 3 years of treatment and 2 years of follow-up. **RESULTS:** There was no difference in time to onset of asthma, defined by prespecified asthma criteria relying on documented reversible impairment of lung function (primary endpoint). Treatment with the SQ grass sublingual immunotherapy tablet significantly reduced the risk of experiencing asthma symptoms or using asthma medication at the end of trial (odds ratio = 0.66, $P < .036$), during the 2-year posttreatment follow-up, and during the entire 5-year trial period. Also, grass allergic rhinoconjunctivitis symptoms were 22% to 30% reduced ($P < .005$ for all 5 years). At the end of the trial, the use of allergic rhinoconjunctivitis pharmacotherapy was significantly less (27% relative difference to placebo, $P < .001$). Total IgE, grass pollen-specific IgE, and skin prick test reactivity to grass pollen were all reduced compared to placebo. **CONCLUSIONS:** Treatment with the SQ grass sublingual immunotherapy tablet reduced the risk of experiencing asthma symptoms and using asthma medication, and had a positive, long-term clinical effect on rhinoconjunctivitis symptoms and medication use but did not show an effect on the time to onset of asthma.

J Rheumatol. 2018;45(3):411-418.

Adiposity in Juvenile Psoriatic Arthritis.

Samad A, Stoll ML, Lavi I, Hsu JJ, Strand V, Robinson TN, Mellins ED, Zisman D; CARRA Legacy Registry Investigators

OBJECTIVE: Adult patients with psoriatic arthritis are at increased risk for obesity and metabolic syndrome, but data regarding adiposity in children with juvenile psoriatic arthritis (JPsA) are limited. Our study assessed adiposity in children with JPsA in the Childhood Arthritis and Rheumatology Research Alliance (CARRA) registry. **METHODS:** Patients with JPsA in the CARRA registry were divided into non-overweight and overweight groups using recommendations from the US Centers for Disease Control, and differences in demographic and clinical characteristics between groups at baseline and after 1-year follow up were assessed using chi-square test, Fisher's exact test, T test, or Mann-Whitney U test, as appropriate. The prevalence of overweight status in the JPsA registry patients was compared to rheumatoid factor-positive and -negative polyarticular juvenile idiopathic arthritis (RF+poly JIA; RF-poly JIA) registry cohorts and the US pediatric population, using a chi-square goodness-of-fit test. **RESULTS:** Overweight children represented 36.3% of this JPsA cohort (n = 320). Compared to non-overweight children, they were significantly older at symptom onset and rheumatologist's first assessment and scored significantly worse on patient/physician outcome measures. At 1-year follow up, changes in body mass index were not associated with changes in clinical features or outcome measures. The prevalence of overweight and obesity in patients with JPsA was significantly higher than in RF+poly JIA patients, RF-poly JIA patients, and the US pediatric population. **CONCLUSION:** In this registry, almost 1 in 5 patients with JPsA were obese and more than one-third were overweight. This is significantly more than expected compared to the US pediatric population, and appropriate long-term follow up of this JPsA subgroup is warranted.

Ann Allergy Asthma Immunol. 2017;119(5):435-440.

Efficacy of bleach baths in reducing severity of atopic dermatitis: A systematic review and meta-analysis.

Chopra R, Vakharia PP, Sacotte R, Silverberg JI.

BACKGROUND: Bleach baths have been proposed as a treatment for decreasing the severity of atopic dermatitis (AD). However, conflicting results have been found regarding their efficacy. **OBJECTIVE:** To determine the efficacy of bleach vs water baths at decreasing AD severity. **METHODS:** We performed a systematic review of all studies evaluating the efficacy of bleach baths for AD. Cochrane, EMBASE, GREAT, LILACS, MEDLINE, and Scopus were searched. Two authors independently performed study selection and data extraction. **RESULTS:** Five studies were included in the review. Four studies reported significantly decreased AD severity in patients treated with bleach on at least 1-time point. However, of 4 studies comparing bleach with water baths, only 2 found significantly greater decreases in AD severity with bleach baths, 1 found greater decreases with water baths, and 1 found no significant differences. In pooled analyses, there were no significant differences observed between bleach vs water baths at 4 weeks vs baseline for the Eczema Area and Severity Index ($I^2 = 98\%$; random effect regression model, $P = .16$) or body surface area ($I^2 = 96\%$; $P = .36$). **CONCLUSION:** Although bleach baths are effective in decreasing AD severity, they do not appear to be more effective than water baths alone. Future larger-scale, well-designed randomized controlled trials are needed.

J Allergy Clin Immunol 2017 Nov;140(5):1240-3. doi:10.1016/j.jaci.2017.09.004.

Allergy and immunology in Africa: Challenges and unmet needs.

El-Gamal YM, Hossny EM, El-Sayed ZA, Reda SM.

The tremendous increase in allergy in the African continent cannot simply be explained by the change in public hygiene. There are many "prehygiene" communities with sewage-contaminated water supplies, helminth infestations, bare footedness, and poor housing, and still there is a high prevalence of allergic disease. Africans can be exposed to many risk factors facilitating severe asthma and wheezing, including airborne viruses, smoke, indoor dampness, cockroaches, and poor access to health care. Although the reporting on food allergy is inadequate to perform systematic reviews or meta-analyses, the available data suggest that food allergy is underdiagnosed. The rate of new HIV infections in high-prevalence settings in Africa remains unacceptably high. Although the annual number of new HIV infections in Sub-Saharan Africa has decreased lately, new HIV infections in the Middle East and North Africa region have increased; however, the current prevalence of 0.1% is still among the lowest globally. Africa is densely populated, and consanguineous mating is high in some areas of North and Sub-Saharan Africa. This allows for emergence of many autosomal recessive primary immunodeficiency diseases. There is urgent need for the establishment of primary immunodeficiency disease registries, stem cell transplantation facilities, and neonatal screening programs. To address these expanding problems and perform local cutting-edge research, Africans need to be empowered by motivated governments, dedicated funds, and compassionate scientific partnership.

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<http://enews.aaaai.org/february-2018/in-the-news>



There's an allergy epidemic in Africa, and not enough specialists to deal with it

Atlas Award-winning study in *The Journal of Allergy and Clinical Immunology* calls for more funding and motivated governments

