Selections from international journals

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Association of childhood attention-deficit/hyperactivity disorder with atopic diseases and skin infections? A matched case-control study using the General Practice Research Database.

Hak E, de Vries TW, Hoekstra PJ, Jick SS.

BACKGROUND: Data to support the hypothesis of a relationship between attention-deficit/hyperactivity disorder (ADHD) and allergies are conflicting. OBJECTIVE: To assess whether children with ADHD are more likely to have a history of atopic disorders, skin infections, and medical prescriptions than children without ADHD. METHODS: We conducted a nested case-control study among boys using the UK General Practice Research Database (GPRD). Cases were defined as children with first-time diagnosis of ADHD who were treated with methylphenidate. Four controls who had neither ADHD nor ADHD drug prescriptions in their medical records were matched to each case on age and general practice. RESULTS: We identified 884 boys with a first-time diagnosis of drug-treated ADHD and 3,536 controls. The independent odds ratios adjusted for age and presence of low birth weight or preterm delivery were 1.4 (95% confidence interval [CI], 1.2-1.7; P < .001) for a medical history of asthma, 1.5 (95% CI, 1.3-1.9; P < .001) for impetigo, and 1.5 (95% CI, 1.3-1.7; P < .001) for any antihistamine drug prescriptions. Other exposures that were more common in cases than controls, though not independently, were cow's milk intolerance and any prescription from the drug categories antiasthmatics, respiratory corticosteroids, topical steroids, antibacterials, or antifungals. CONCLUSION: Despite possible limitations inherent to observational studies, this study lends support to the emerging evidence that childhood ADHD is associated with atopic diseases and impetigo. Further interdisciplinary research is needed to understand the underlying mechanisms and to evaluate targeted preventive, diagnostic, and therapeutic interventions.

Pediatr Allergy Immunol. 2013;24(3):244-9.

Sensitization to Malassezia in children with atopic dermatitis combined with food allergy.

Kekki OM, Scheynius A, Poikonen S, Koskinen A, Kautiainen H, Turjanmaa K.

BACKGROUND: The yeast Malassezia belongs to our normal cutaneous flora, but is capable of sensitizing individuals with atopic dermatitis (AD). Our objective was to investigate the prevalence of sensitization to Malassezia with a 10-yr follow-up among children suffering from AD combined with food allergy (FA) in relation to the extent of AD in infancy. METHODS: One hundred and eighty seven infants diagnosed with AD and milk/wheat allergy before 1 yr of age were included in the study. The area of AD was estimated from patient records of the first visit and measured with SCORAD at the 10-yr follow-up. Specific IgE against Malassezia was determined with ImmunoCAP™ at 11 yr of age. RESULTS: In infancy, 24 children (13%) were allergic to milk, 71 (38%) to wheat, and 92 (49%) to both milk and wheat, and 94 (50%) children had mild, 57 (30%) moderate and 36 (19%) severe AD. At the 10-yr follow-up visit, 19 (10%) of the children had ongoing milk and/or wheat allergy; 147 children (79%) had mild AD and 30 (16%) had SCORAD index of 0. Specific IgE against Malassezia mix was positive (≥0.35 kU/l) in 27% and specific IgE against M. sympodialis in 20% of the 187 children. The area of AD in infancy was associated with a greater risk of having allergen-specific IgE to Malassezia at the 10-yr follow-up. The risk ratio for FA was 3.11 (95% CI: 2.05-4.72; p < 0.001) if specific IgE to Malassezia was positive. CONCLUSIONS: Infants with severe AD and FA seem to have a greater risk of becoming sensitized to Malassezia during a 10-yr follow-up.

Pediatr Pulmonol. 2013;48(10):1016-25.

The lung is involved in juvenile dermatomyositis.

Pouessel G, Deschildre A, Le Bourgeois M, Cuisset JM, Catteau B, Karila C, Nève V, Thumerelle C, Quartier P, Tillie-Leblond I.

BACKGROUND: Juvenile dermatomyositis (JDM) is the main cause of chronic idiopathic inflammatory myopathy of autoimmune origin in children. The aim of this multicenter prospective study was to describe respiratory status and treatment of children followed for JDM. METHODS AND PATIENTS: Clinical manifestations, pulmonary function tests (PFT), chest high-resolution computed tomography (HRCT) scan results, and treatments and their adverse effects were analyzed in children followed for JDM. RESULTS: Twenty-one patients (median age: 9.9 years; range: 20 months-18 years) were included. The median of disease duration at the time of the analysis was 3 years (range: 6 months-9 years 4 months). Overall 16 (76%) of 21 children presented with a respiratory involvement related to JDM including interstitial lung disease (n = 3) and/or respiratory muscle involvement (n = 7). Seven patients presented with other nonspecific manifestations. Three children had aspiration pneumonia. A chest HRCT was performed in 15 children, and abnormalities were observed in 12. PFT were performed in 20 of 21 patients. Seven showed functional abnormalities: restrictive ventilatory defect (n = 3) or obstructive ventilatory defect (n = 4). Six patients had abnormal respiratory muscle tests, including three with a restrictive ventilatory defect and one with an obstructive ventilatory defect. One other child with an acute aspiration pneumonia had a clearly muscle respiratory involvement but was too young to perform respiratory muscle tests and confirm this diagnosis. Treatment comprised systemic corticosteroid for all patients and adjuvant immunosuppressive therapy for 11. Adverse effects linked to treatment were reported in eight patients. CONCLUSION: The frequency of lung involvement in children with JDM justifies systematic respiratory assessment with PFT including measures of respiratory muscle strength. We suggest that a chest HRCT scan is indicated in cases of respiratory symptoms and/or PFT abnormalities. Longitudinal studies are needed to assess pediatric characteristics, long-term outcomes, and responses to treatment taking into account the risk-benefit ratio.

J Allergy Clin Immunol. 2013;132(1):101-9.

Omalizumab in patients with symptomatic chronic idiopathic/spontaneous urticaria despite standard combination therapy.

Kaplan A, Ledford D, Ashby M, Canvin J, Zazzali JL, Conner E, Veith J, Kamath N, Staubach P, Jakob T, Stirling RG, Kuna P, Berger W, Maurer M, Rosén K.

BACKGROUND: Patients with chronic idiopathic urticaria/chronic spontaneous urticaria (CIU/CSU) often continue to experience symptoms despite receiving standard-of-care therapy with H1-antihistamines along with 1 or more add-on therapies. OBJECTIVES: We sought to evaluate the safety and efficacy of 24 weeks of treatment with omalizumab in patients with persistent CIU/CSU despite treatment with H1-antihistamines at up to 4 times the approved dose plus H2-antihistamines, leukotriene receptor antagonists, or both. METHODS: In this phase III study patients were randomized to receive 6 subcutaneous injections at 4-week intervals of either 300 mg of omalizumab or placebo, followed by a 16-week observation period. The primary objective of the study was to evaluate the overall safety of omalizumab compared with placebo. Efficacy (itch severity, hive, and urticaria activity scores) was evaluated at weeks 12 and 24. RESULTS: The overall incidence and severity of adverse events and serious adverse events were similar between omalizumab and placebo recipients; the safety profile was consistent with omalizumab in patients with allergic asthma. At week 12, the mean change from baseline in weekly itch severity score was -8.6 (95% CI, -9.3 to -7.8) in the omalizumab group compared with -4.0 (95% CI, -5.3 to -2.7) in the placebo group ($P < .001$). Significant improvements were seen for additional efficacy end points at week 12; these benefits were sustained to week 24. CONCLUSION: Omalizumab was well tolerated and reduced the signs and symptoms of CIU/CSU in patients who remained symptomatic despite the use of H1-antihistamines (up to 4 times the approved dose) plus H2-antihistamines, leukotriene receptor antagonists, or both.