Peculiarities of phenotyping of lymphocytes in patients with pollen allergy against the backdrop of active herpesvirus infection type 4, 5 and 6

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720 Safety And Efficacy Of Dupilumab In Adult Patients With A History Of Eczema Herpeticum

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RATIONALE: Eczema herpeticum is not uncommon in patients with severe eczema. Prior studies have showed an increase rate of some herpes simplex exacerbation (oral ulcers) in retrospective analysis of patients treated with dupilumab versus placebo but no increase in eczema herpeticum. Efficacy and side effects of dupilumab, recently FDA approved for severe eczema, have not been reported in patients with a prior history of eczema

METHODS: We retrospectively analyzed three adult patients (denoted A, B, C) with a history of eczema herpeticum on antiviral prophylaxis (valcyclovir) who initiated Dupilumab therapy. We calculated an Eczema Area and Severity Index (EASI) score for each patient beforeand after Dupilumab therapy and analyzed reported side effects in the first month of therapy.

RESULTS: None of the patients had exacerbations of eczema herpeticum, herpes simplex or any herpes related symptoms in the first month of treatment. Patient A had no change in EASI and discontinued dupilumab due to increased intraocular pressure and headaches. Patient B had some improvement in EASI and has continued therapy but reports arthralgia. Patient C had no change in EASI score and discontinued dupilumab due to fatigue, headaches and arthralgia.

CONCLUSIONS: Dupilumab therapy in patients with a history eczema herpeticum did not result in eczema herpeticum in the first month of therapy but was discontinued in 2 of 3 patients because of other possible medication related symptoms. We suggest prospective studies of safety and efficacy of dupilumab in patients with a history of eczema herpeticum are indicated.

721 B Antigen Protects Against the Development of α-Gal-mediated Red Meat Allergy

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RATIONALE: Red meat allergy (RMA) is a recently recognized disease characterized by delayed-onset anaphylaxis, angioedema, and/or urticaria occurring approximately 3-6 hours after ingesting mammalian meats containing the antigen galactose-α-1,3-galactose (α-Gal). The molecular structure of α-Gal is similar to that of the B antigen, a self-antigen in patients with blood types B or AB. This provokes the hypothesis that patients who harbor the B antigen are less likely to undergo allergic sensitization to α-Gal and develop RMA.

METHODS: To test this, we employed a cohort of n=92 RMA patients and n=188 controls, all with known ABO types. We compared expected and observed frequencies of blood types O, A, B and AB in the two groups, and we performed logistic regression to determine the odds ratios (OR) and 95% confidence intervals (95%CI) of having RMA according to blood type.

RESULTS: Among those with RMA, the observed frequency of the B antigen (types B or AB) was markedly lower than expected (expected 20.3%, observed 4.35%, P=0.005). Patients expressing the B antigen were less likely than those without the B antigen (blood types O or A) to produce α-Gal-specific IgE (OR 0.19, 95%CI 0.04-0.80, P=0.023) or beef-specific IgE (OR 0.29, 95%CI 0.11-0.80, P=0.016) and were 5-times less likely to have been diagnosed with red meat allergy (OR 0.20, 95%CI 0.07-0.62, P=0.004).

CONCLUSIONS: Patients whose red blood cells express the B antigen are protected from developing red meat allergy and are less likely to produce anti-α-Gal IgE. These findings suggest that ABO blood type affects one's susceptibility to RMA.

722 Peculiarities of phenotyping of lymphocytes in patients with pollen allergy against the backdrop of active herpesvirus infection type 4, 5 and 6

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RATIONALE: Study the peculiarities of the phenotypic characteristics of lymphocytes and their activation markers in patients with pollen allergy against herpesvirus infections.

METHODS: 162 persons were examined with clinical and laboratory manifestations of pollen allergy, age 32,6 ± 2,4 years, 53,1% - women, 46,9% - men. SPT Diater, Spain, total and specific IgE, ELISA. EBV, CMV, HHV6 by the polymerase chain reaction using Rotor Geen 6000. Phenotyping of lymphocytes - a flow cytofluorimetre "Bekton Dickenson" (USA).

RESULTS: Based on specific allergic studies, pollen allergy was confirmed in 158 (97.5%) patients, in 112 (70.8%) of whom polysensitization was detected, and in 46 (29.2%) monosensitization was confirmed. According to the data of molecular genetic studies, in 128 (81.0%) cases activated herpesvirus infection was detected: in 48 (37.5%) cases - monoinfection, in 80 (62.5%) - combined infection and in most 47 (58.7%) cases EBV + HHV6. Patients were divided into 3 groups: the first one - people with pollen allergy without viral activity; the second one - people with pollen allergy + viral activity. Third group - 50 healthy people. Patients in the second group showed an increase in CDHLA-DR + cells and B-lymphocytes and decreased NK-cells (p<0.05). In 75.0% of these patients, increases of levels of total IgE, that was 1.1 times more than in patients in the first group.

CONCLUSIONS: In patients with pollen allergy against the backdrop of active herpesvirus infection, there was an increase in the cell-dependent inflammatory process with the creation of conditions for the formation of hyper-IgE syndrome.

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