

842 Quality of Life Assessment in Patients with Chronic Urticaria

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RATIONALE: Assess the quality of life in patients with chronic urticaria (CU) through the questionnaire - Chronic Urticaria – Quality of Life Questionnaire (CU-Q2oL).

METHODS: This cross-sectional study assessed patients with chronic urticaria followed up in a tertiary hospital. The CU-Q2oL contains 23 questions, with scores from 1 (no complaints) to 5 (many complaints). We consider the scores ≥ 3 as poor quality of life. They were classified into two groups: A – those patients who respond to antihistaminics (AH1), and B – others medications beyond the AH1. We considered the difference between (B-A) ≥ 1 in each question, as relevant. The groups were assessed about the duration of disease ≥ 10 years.

RESULTS: Sixty-one patients participated in the study, of these, 58 (95%) were female and the mean age was 41 years. The average of the CU-Q2oL score was 72.5 for group B and 57.2 for group A. When we evaluated the time of disease ≥ 10 years, group A had 37% comparing to group B, 56%. The difference between groups B and A ≥ 1 was observed for the following issues: 3, 15, 17, 19, 20, 21.

CONCLUSIONS: These results showed that the group with recalcitrant CU (group B) had urticaria for a longer time and a higher score for CU-Q2oL. Among the issues, those that were more important were related to social relationships, diet and side effects of medicines.

843 Comparison of Skin Test Reactivity of Sublingual Immunotherapy Tablets to Commercial Extracts

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RATIONALE: To evaluate and compare skin test reactivity of sublingual immunotherapy tablets (SLIT) based solutions to commercial grass and ragweed extracts (CE).

METHODS: Sixteen subjects with allergic rhinitis consented to allergy skin testing with aqueous preparations of Grastek® and Ragwitek®; Timothy grass and short ragweed extract from three commercial suppliers, fish extract and SLIT excipients. Grastek® and Ragwitek® were diluted to similar concentrations found in CE for prick and intradermal testing. Intradermal testing was performed only when prick tests were negative. Intradermal test results were combined with prick test results. Results from CEs were compiled into a composite index via majority classification. Fleiss' Kappa and non-parametric bootstrap confidence intervals were computed for CE and SLIT versus the CE composite index, yielding measures of agreement between CEs themselves and the CE composite index and SLIT, respectively.

RESULTS: Though the number of subjects is small, Kappa suggests strong agreement amongst the three CEs as well as between the CE composite index result and the analogous SLIT (Grass CEs: $\kappa=0.92$ [0.71–1.0]; Grass index vs Grastek®: $\kappa=0.87$ [0.58–1.0]; Ragweed CEs: $\kappa=0.92$ [0.63–1.0]; Ragweed index vs Ragwitek®: $\kappa=1.0$ [N/A]). The bootstrap confidence intervals do not include 0 in all but one case, suggesting that Kappas are significantly different from 0.

CONCLUSIONS: This study shows statistically significant skin test reactivity to aqueous solutions of Grastek® and Ragwitek® comparable to CE. Skin test reactions of each CE were consistent with each other; the skin test reaction of Grastek® and Ragwitek® were consistent with each CE.

844 Changes of Feno and Nasal NO Levels after Treatment in Pediatric Allergic Rhinitis

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RATIONALE: The fractional concentration of exhaled NO (FeNO) has been shown to be increased in inflammatory airway diseases, including bronchial asthma (BA), allergic rhinitis (AR), and chronic rhinosinusitis. In the present study, we examined the differences of oral FeNO and nasal FeNO levels in AR patients with or without BA.

METHODS: In the cross-sectional study, 31 patients with mild-persistent or severe-intermittent AR patients, 23 AR patients with BA, and 19 normal subjects were enrolled. The FeNO levels were measured by using a handheld electrochemical analyzer (NObreathR; Bedfont Scientific Ltd., Rochester, Kent, UK) before treatment and at one month after treatment. The nasal FeNO levels were measured by using a nose adaptor. All patients were measured serum total eosinophil count, total IgE, allergen-specific IgE against six common aeroallergens by the ImmunoCAP or skin prick test.

RESULTS: The oral FeNO levels before and after treatment showed no significant differences between AR and AR with BA. The nasal FeNO levels before treatment were significantly higher in the AR with BA than the AR ($P=0.005$). After treatment, the nasal FeNO levels were no significant differences between diseases groups. The nasal FeNO levels after treatment were significantly lower compared to the nasal FeNO levels before treatment in both AR and AR with BA (AR: $P=0.044$, AR with BA; $P=0.004$).

CONCLUSIONS: The nasal FeNO measurement in AR patients is suitable method for monitoring the effect of treatment.

845 Role of Fibrocytes in Allergic Rhinitis

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RATIONALE: Fibroblast progenitor cells called fibrocytes are increased in patients with asthma following allergen exposure. These cells may play a major role in lower airways remodeling. Considering that allergic rhinitis is an asthma risk factor, we hypothesized that seasonal allergen exposure has an effect on the profile of fibrocytes isolated from blood of allergic rhinitis subjects without asthma.

METHODS: Non asthmatic subjects with seasonal allergic rhinitis were recruited. At baseline (out of the pollen season), skin prick tests, spirometry, methacholine bronchoprovocation, blood sampling and sputum induction were performed. At the peak of rhinitis symptoms, the same tests were repeated. Fibrocytes number and level of activation were determined in whole blood. Cells were stained for fibrocyte markers (CD34, CD45, CXCR4, collagen I) and analyzed by flow cytometry.

RESULTS: Eighteen subjects (12F:6M) aged 31 ± 9 years were recruited. During the pollen season, the percentage of blood fibrocytes significantly decreased (median [25-75 percentile], 10.1 [6.4-20.7]% vs 3.7 [4.2-10.1]%, $P=0.03$) in subjects sensitized to trees and significantly increased (15.5 [9.9-23.1]% vs 64.0 [57.6-73.6]%, $P=0.001$) in subjects allergic to grass. No significant difference in mean fluorescence of CXCR4 was observed between baseline and pollen season (mean \pm SD: 1759 ± 682 vs 1454 ± 795 (arbitrary units), $P=0.19$).

CONCLUSIONS: The number of blood fibrocytes varies during pollen season according to allergen exposure but may indicate an active migration of these cells from the periphery to the airways. A prolonged pollen exposure could lead to the increase of blood fibrocytes. These results may help identify predictors of asthma development.