L4 The Diagnostic Testing Accuracy of Urinary Leukotriene E4 in Determining Aspirin Intolerance in Asthma: A Systematic Review and Meta-Analysis

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RATIONALE: Urinary leukotriene E4 (ULTE4) may be a biomarker that distinguishes aspirin-intolerant asthma from other asthma subtypes. Specific Aim: to estimate the diagnostic testing accuracy of ULTE4 as a marker of aspirin intolerance in patients with asthma using previously published studies.

METHODS: We identified relevant clinical studies from a systematic review of English and non-English articles using MEDLINE, EMBASE, and CENTRAL. Articles were screened at the abstract and full text level by two independent reviewers. We included previously published studies which analyzed ULTE4 in human subjects with asthma who had been characterized as having or not having aspirin intolerance on the basis of a specified definition. Receiver operator characteristic (ROC) curves were constructed and area under curve (AUC) calculated for each method used to measure ULTE4 by comparing against the gold standard of a positive aspirin challenge.

RESULTS: The search strategy identified 867 potential articles, of which 86 were reviewed at the full text level and 10 met criteria for inclusion. The sensitivity, specificity, positive predictive value and negative predictive values of ULTE4 to determine aspirin intolerance in asthmatic subjects were 0.55, 0.83, 0.77, 0.65 (Amersham-EIA); 0.76, 0.79, 0.73, 0.82 (Cayman-EIA); 0.73, 0.81, 0.76, 0.79 (mass spectrometry) and 0.81, 0.80, 0.65, 0.90 (radioimmunoassay) at optimal threshold of 192, 510, 165 and 69 pg/mg Cr respectively. The diagnostic odds ratio for each methodology was 6.11; 12.27; 11.70; and 17.33 respectively.

CONCLUSIONS: This study defines the diagnostic testing accuracy of ULTE4 in determining aspirin intolerance in asthma.

L5 Factors Affecting Control and Adherence to One Year Treatment in Elderly Asthmatics in Turkey

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RATIONALE: The objective of this study was to investigate the factors that affected the control and the adherence to one year treatment of newly diagnosed elderly asthmatics(EA) living in different areas of Turkey, and to compare these with young asthmatics(YA) regarding different parameters.

METHODS: A total of 1116 newly diagnosed adult asthmatic patients from 122 secondary or tertiary centers of different geographic locations took part in the study, and a standard web-based questionnaire was applied from July-2012 to March-2014. Patients were divided into two groups as YA (age: 18-59) and EA (age≥60). The differences in biometric parameters, pulmonary functions, allergic status, comorbidities, first given therapies, one year control, and adherence to treatment were analyzed.

RESULTS: The age of 12.2% of the new-onset asthma patients was ≥60 years. Body mass index was found as 27.8 kg/m^2 for YA and 29.8 kg/m^2 for EA ($p<0.001$). The presence of any comorbidity was 66.2% and 52.2% in EA and YA, respectively ($p=0.003$). Combined inhaled steroid plus long acting beta2 agonists were the most frequently administered treatment (83.0% vs. 93.4% in YA and EA, $p=0.002$).

The asthma control during one year was not significant between groups. But the number of visits were elevated in EA than YA (1.60 vs 1.22, $p=0.011$). The adherence to therapy was not significant between groups. The adherence to therapy in EA was significantly correlated with the presence of hypertension ($p< 0.025$).

CONCLUSIONS: Our findings demonstrated that EA presented more comorbidities and the presence of hypertension increased adherence to asthma treatment in elderly asthmatics.

L6 Comparison of Omalizumab Therapy Effectiveness in Patients with Hypersensitivity to Non-Steroidal Anti-Inflammatory Drugs (NSAID) and Patients Who Tolerate NSAID (non-NSAID) – Polish Real Life Experience

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RATIONALE: Hypersensitivity to non-steroidal anti-inflammatory drugs (NSAID) is a distinct phenomenon of severe asthma, but may coexists with allergy. The aim of the analysis was to compare the effectiveness of omalizumab (OMA) in the treatment of severe allergic asthma in patients with hypersensitivity NSAID to patients who tolerate NSAID (non-NSAID).

METHODS: 38 patients started OMA therapy in the Polish program for the treatment of severe allergic asthma in Barlicki Hospital between 2013 and 2015 year. We prospectively evaluated OMA effectiveness recording changes in oral corticosteroids daily dose (OCS), annual numbers of asthma exacerbations, the Asthma Control Questionnaire (ACQ) score, and the Asthma Quality of Life Questionnaire (AQLQ) score in 16th week and 52nd week of therapy. At the baseline the positive history of hypersensitivity to NSAID was reported by 14 patients, 24 patients tolerated NSAID.

RESULTS: The baseline characteristic of study groups in respect of demographic data, anthropologic data and severity of asthma did not significantly differed between NASID and non-NASID ($P>0.05$). 4 patients (2/2 from NASID/non-NASID) stopped themselves the therapy due to subjective lack of benefit. In both groups we observed significant improvement in ACQ, AQLQ scale as well the reduction of exacerbations and the OCS dose in 16th and 52nd week ($P<0.05$). The improvement in asthma control parameters between study groups did not differed in 16th and 52nd week ($P>0.05$).

CONCLUSIONS: The OMA seems to be equally effective in patients suffering from severe allergic asthma independently of NSAID hypersensitivity status, but larger population study is required to confirm this observation.