

835 NOS2 Single Nucleotide Polymorphism G37498A in Venezuelan patients with Asthma or COPD.

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RATIONALE: NOS2 is an important enzyme in inflammatory diseases. In spite the fact that NO is increased in several inflammatory diseases, no major differences were reported for various SNP in the NOS2 gene of patients with asthma or COPD. The aim of the study was to assess a new NOS2 SNP G37498A associated with Parkinson disease and its progression (1).

METHODS: genomic DNA were extracted from blood samples of 330 age and gender matched individuals (100 controls, 130 COPD and 100 asthma) using Qiagen genomic DNA kit. The G37498A SNP was analyzed by PCR-RFLP as described previously (1).

RESULTS: Patients with COPD had significantly ($P < 0.01$) higher frequency of heterozygotes (75% vs. 40.3% control, 56% asthma) and lower AA homozygotes (8% vs. 31% control, 23% asthma). No association was found among polymorphism and FEV₁; nonetheless, all severe COPD patients (50) were heterozygotes.

CONCLUSIONS: The AA homozygote may be a protective allele in COPD Venezuelan population.

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1.- Leveque C. et al. Hum Mol Genet. 2003; 12:79-86.

836 The Relationship of Body Mass Index (BMI) on Asthma Outcome Measures

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RATIONALE: BMI is reported to influence asthma prevalence, severity and response to treatment. BMI in the US continues to increase and disproportionately affects African-Americans. This retrospective analysis was designed to explore the effect of BMI on asthma.

METHODS: 473 African-American subjects were studied who were symptomatic on FP100mcg [or equivalent] and then stepped-up to 4-weeks of FP 250mcg, twice daily prior to randomization [SFA103153] (Bailey, et al. *Curr Med Res Opin* 2008;24:1669-82). Outcomes were examined by BMI categories: <20 , ≥ 20 - <25 , ≥ 25 - <30 , ≥ 30 - <35 , ≥ 35 - <40 and ≥ 40 . This analysis examined the period on FP 250 for lung function, symptom scores, albuterol use and exacerbations.

RESULTS: AM and PM PEF assessed by BMI demonstrated an inverse J-curve distribution. Mean AM PEF, by BMI categories, were 314, 334, 342, 352, 330 and 298 L/min and 330, 351, 352, 370, 342, 313 L/min for PM PEF, respectively. BMI category did not alter screening symptom score or albuterol use. The rate of an asthma exacerbation was 39% for patients with a BMI ≥ 40 and 16-21% for other BMI categories. After 4-weeks of FP 250mcg, improvement in FEV₁, symptom score, albuterol use and nighttime awakenings did not vary by BMI. Change in AM and PM PEF was smallest for the lowest and highest BMI cohorts. BMI had no additional effect on the 12-month study.

CONCLUSIONS: BMI appears to influence PEF outcomes, but have little effect on other outcomes of asthma control in African-Americans. This suggests that increasing BMI may affect lung function, but have little impact on overall asthma control.

837 How Persistent is Persistent Asthma

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RATIONALE: Persistent asthma (PA) can be defined based on clinical course over the past month or using administrative data for healthcare utilization in a 12 month period. The relationships between these two PA definitions and their stability over time are not well-defined.

METHODS: Administrative data were used to identify patients meeting the Healthcare Effectiveness Data and Information Set (HEDIS) criteria for PA in year 1 (2006). At the end of year 2 and 5 months later, patients were mailed a survey to define "survey PA" based on symptoms and medication use in the prior month and exacerbations in the prior 12 months.

RESULTS: 2,895 of 14,856 patients (19.5%) with HEDIS PA returned the first survey. 2,517 (86.9%) of responders reported survey PA. Patients with survey PA were more likely to have requalified as HEDIS PA (68%) in year 2 than those without survey PA (22%). However, 82% of patients who did not requalify as HEDIS PA in year 2 had survey PA. Among patients completing the follow-up survey ($n = 1,290$), 95% with first survey PA had follow-up survey PA; 54% of patients without first survey PA had survey PA on the follow-up survey. These results could not be accounted for by increased severity of survey responders, because responders had significantly less ($p < 0.05$) beta agonist, oral corticosteroid, and emergency hospital utilization than non-responders.

CONCLUSIONS: HEDIS-defined PA is generally consistent with survey-defined PA. Some variability of disease activity can be seen in survey-defined PA over time.

838 Prevalence and Severity of Asthma Symptoms in Adult Population of Northern Argentina

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RATIONALE: The ISAAC study explored the prevalence of asthma in childhood worldwide, but no data on asthma in adults is available for Latin America. In a survey performed in different cities of Argentina, preliminary results showed that more than 10% reported having wheezed in last 12 months.

METHODS: Here we report the results of a cross sectional survey in Salta, one of the most representative cities of Northern Argentina, where people between 18 and 65 years old, both sexes, randomly selected, voluntary answered a questionnaire based on the validated ISAAC and ECRHS for our purposes.

Questions on wheezing (WZ) ever, WZ in the last 12 months, medical diagnosis of asthma, WZ that limit speech, WZ induced by drugs or at working place were investigated.

Committee on Ethics of the main institution at the city approved the protocol.

RESULTS: 3154 people answered, 55.9% female, median age 32.3 years old (18-65). Wheezing ever %20.6, wheezing last 12 m % 11.6, asthma diagnosis %7.6, severe asthma % 2.8, occupational asthma %1.5, and drug induced asthma %2.6.

CONCLUSIONS: The prevalence of asthma symptoms, diagnosis of asthma and provoking factors are high enough to warn health authorities. This is the first report for that zone of the country, with a population of more than half a million inhabitants.