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Title: LSC 2013 abstract - The role of beta2 adrenergic receptor polymorphism in asthmatic patients

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Body: It is known that beta2 adrenoreceptor polymorphisms could lead to a genotype-specific response to treatment and different asthma phenotypes.The purpose of this study is to analyse the association between Arg16Gly (rs1042713) and Gln27Glu (rs1042714) polymorphism with asthma severity. Asthmatic patients (n= 49) were studied for these polymorphisms by PCR-RFLP (Polymerase chain reaction- restriction fragment length polymorphism). Control of asthma assessed by validated instrument (ACQ7 and PAQLQ). Statistical analysis was performed with PASW version 18 establishing a significance level of $p< 0.05$. The mean age of the 49 asthmatics was 35.59 ± 20.519 (7 -72 years); 24 females and 25 males; 41 atopics and 8 non-atopics; 32 with controlled and 17 with uncontrolled asthma. In asthmatics for Arg16Gly polymorphism, the frequencies of the allele A is 66.3% and the allele G is 33.7%; and for the Gln27Glu polymorphism, the frequencies were for allele C 30.6% and G 69.4%. Genotypes in the asthmatics for Arg16Gly polymorphism were: AA: 38.8%; AG: 55.1%; GG: 6.1% and for the Gln27Glu polymorphism were: CC: 10.2%; CG: 40.8%; GG: 49%. In asthmatics for Arg16Gly and Gln27Glu polymorphisms, there is no statistical difference ($p>0.05$) in genotypes: between atopics and non atopics; controlled and uncontrolled asthma; and in the different age-groups. The frequencies of genotype Arg16Gly polymorphism were statistical different between males and females, being the genotype carrying the allele G more frequent among males ($p = 0,039$).In this study sample we were not able to demonstrate an influence of Gln27Glu and Arg16Gly beta-2 receptor gene polymorphisms on asthma severity.