

Is There an Association Between *NOD2* Gene Polymorphisms and Chronic Obstructive Pulmonary Disease Progression?

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ABSTRACT Chronic obstructive pulmonary disease (COPD) is characterized by persistent airflow limitation associated with an increased chronic inflammation. Recent studies suggest that innate immune system receptors may be involved in this enhanced response as observed in COPD. The aim of this study is to investigate the correlation between the nucleotide-binding and oligomerization domain 2 (*NOD2*) polymorphisms and development, severity and progression of COPD in the Turkish population. Three *NOD2* polymorphisms were genotyped using polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) and real time PCR analysis involving 168 patients and 100 healthy controls. No statistical difference was observed between the case and the control groups for genotype and allele frequencies of the rs2066844, rs1077861 and rs3135500 polymorphisms. Contrary to the available literature, annual forced expiratory volume in one second (FEV1) decline was statistically greater in GG carriers of the rs3135500 polymorphism than in AA carriers ($p=0.048$). The *NOD2* gene rs3135500 polymorphism may be related progression of COPD in the Turkish population.