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Title: Association between a functional TLR1 single nucleotide polymorphism and susceptibility to pulmonary tuberculosis

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Body: Background: Toll-like receptors (TLRs) are key sensors of mycobacterial infections and play a crucial role in the initiation and coordination of the antimycobacterial innate immune response. A functional TLR1 single nucleotide polymorphism (SNP), T1805G has been associated with susceptibility to pulmonary tuberculosis (PTB) but contradictory results among different populations have been reported. Objectives: To assess if this functional TLR1 SNP could be associated with susceptibility or resistance to pulmonary tuberculosis in a genetically homogeneous population (Cantabria, Northern Spain). Methods: Through a case-control study, DNA obtained from patients with PTB (n = 190) and age- and sex-matched healthy controls (n = 192) were analysed by polimerase chain reaction followed by restriction fragment length polymorphism (PCR-RFLP). Results: We found a significant difference in the distribution of the two alleles between PTB patients and healthy controls. In this way, 1805G allele and GG genotype were significantly more frequent in PTB patients than in healthy controls [p = 0.02, OR (95%CI) 1.43 (1.07-1.90)] and [p = 0.005, OR (95%CI) 2.04, (1.26-3.31)] respectively. Conclusions: Our results indicate that in our population, 1805G allele and GG genotype influence susceptibility to PTB, in contrast with data observed in other populations.