POLYMORPHISM OF THE CYTOCINES GENES TNFα, IFNγ, TGFβ, IL-6, AND IL-10 IN HANSENÍASE.

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Background: Cytokines play an important role in the immune response of the host against *Mycobacterium leprae*. Polymorphisms of cytokine genes have been implicated as a host factor influencing susceptibility to infectious diseases. The objective of the study was to verify the relationship between leprosy and TNFα (tumor necrosis factor-α) -308 G → A gene polymorphisms; IFNγ (interferon-γ) +874 T → A; IL-6 (interleukin-6) -174 G → C; IL-10 -1082 A → T, -819 C → T, -592 A → C and TGFβ (tumor growth factor-β) codon 10 and 25. **Material and Methods**: The study was conducted with 103 individuals from the State of Pará, Divided into 25 multibacillary (MB), 28 paucibacillary (PB) and 55 intradomiciliary contacts. Blood collection for DNA extraction and analysis of cytokine polymorphisms typified by the polymerase chain reaction (PCR) technique were performed. **Results**: There were no significant associations between TNFα -308, INFγ +874 and IL-6 -174 cytokine gene polymorphisms and susceptibility to leprosy, MB and PB forms. In relation to TGFβ codon 10 and 25, a tendency to associate the presence of the C allele in codon 10 with leprosy was demonstrated, with the T allele being the most frequent in the contacts ($p = 0.056$). In relation to IL-10 -1082, -819, -592, we found an association of the GCC / GCC genotype with the predisposition to the disease and the A-allele at position -1082 with the leprosy protection, being observed a greater predominance of ACC / ATA (31.3%) and GCC / ATA (37.5%) ($p = 0.03$) and the A-allele at position -1082 (76.85%) ($p = 0.043$) in the contact groups, while the GCC / GCC was strongly found in the MB group (22.2%) ($p = 0.05$). **Conclusion**: In this way, the study of the polymorphism of the cytokine genes provides a better understanding of the relationship between host genetics and leprosy, complementing studies on its transmission and intra and extra familial factors in its immunological characteristics.

Key words: Cytokines, Polymorphism, Leprosy, Susceptibility.