Abstract

Background: Not every individual exposed to Mycobacterium tuberculosis becomes infected. One host genetic factor, involved in modulating the immune response that has been studied in many ethnic groups is the association of human leukocyte antigens (HLA) with susceptibility to tuberculosis (TB). Objective: To investigate the association between TB, HLA-DRB1 and HLA-DQB1 alleles in a Portuguese population. Methods: HLA-DRB1 and HLA-DQB1 gene polymorphisms were analyzed by PCR-SSP in 92 TB patients, and 82 healthcare professionals without TB but exposed on a daily basis to infectious patients for more than two years (healthy exposed - HE). Tuberculin skin test reaction (TST), was positive in 69 individuals (all over 15 mm) in the HE group (HE+) and negative in thirteen (HE¿). Results: HLA-DRB1*14 frequency is higher in the TB patients group (7 % vs. 0; p = 0.038) than in HE+. Conclusions: No genetic marker clearly indicative of disease susceptibility or resistance was identified in this study. However, HLA-DRB1*14 was more frequent in TB patients suggesting that it may be involved in the evolution infection towards active TB in our population.

Keywords

HLA, Tuberculosis, Susceptibility, Resistance, Healthcare workers.