

Role of HLA-A, HLA- B, HLA-DRB1 and HLADQB1 Alleles in HIV-1 Patients with Pulmonary Tuberculosis Co-infection from India

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KEYWORDS HIV1. PTB. Co-Infection. HLA. Western India

ABSTRACT We studied the role of HLA HLA-A, B, DRB1 and DQB1 in HIV-1 patient's co infected with pulmonary tuberculosis (PTB). A total of 102 HIV-1+ patients co-infected with pulmonary tuberculosis and 200 healthy controls were included in HLA analysis. HLA-A*, HLA B* HLA-DRB1* and DQB1* typing was done molecularly by PCR-SSOP (Polymerase Chain reaction-Sequence Specific Oligonucleotide Probing) method using kit (Dynal Kit – Invitrogen). The frequencies of the HLA-A*, HLA-B* HLA-DRB1* and HLA-DQB1* alleles were determined using standard software. The HLA alleles identified among HIV+ve/PTB+ve co-infected patients was compared with healthy controls. Our results showed a significantly increased frequency of HLA-B*08:01:01 (p=0.011, OR 3.335, 95% CI 1.35-8.18) HLA-DQB1*03:01:03 (p<0.0001, OR 107.5, 95% CI 6.195-1865.3) in HIV+ve/PTB+ve co-infected patients when compared with healthy controls. Similarly HLA-DQB*06:01:02 (p=0.003, OR 4.808, 95% CI 1.72-13.39), HLA DQB1*03:01:01 (p=0.045, OR 0.219, 95% CI 0.051-0.940), HLA-DQB1*06:01:01:01 (p=0.012, OR 0.334, 95% CI 0.145-0.770), allele frequency was observed in HIV+ve/PTB+ve co-infected patients when compared with healthy controls. We can conclude that different HLA alleles may render susceptibility or protection to in different ethnic population.