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THE ASSOCIATION OF HLA-*DRB1& DQB1* ALLELES AND HAPLOTYPE FREQUENCY IN IRAQI PATIENT WITH PULMONARY TUBERCULOSIS IN THI-QAR PROVINCE, IRAQ

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ABSTRACT

Tuberculosis (TB) is infectious disease that usually affects the lung. It is the second greatest killer due to a single infection agent worldwide (*Mycobacterium tuberculosis*), about one-third of the world, population is believed to have latent TB. There is 10% chance of latent becoming active TB. This study conducted in Thi-Qar province, included 210 samples (70 patients, 70 household contacts and 70 controls) with ages ≤10 to ≥70 years who were referred to AL-Nasiriya Center of Tuberculosis and Chest Diseases from the period September 2012—July 2013. Regarding the collected samples were both sputum and blood were obtained from 210 samples then conduct several test to diagnosis the infection with *Mycobacterium tuberculosis* as Tuberculin Skin Test (TST), and Gene X-pert. The results of TST were positive for total patients, positive for 25 cases of the HHCs and negative for total control group. While AFB examination were positive for total patients group, positive for 22 cases of HHCs group and negative for control group. The results of x-ray screening were positive for all patients group, in HHCs were positive for 20 cases and negative for all control group. While the results of the last diagnostic test Gene X-pert showed positive for all patients' cases, negative for control group and positive for 24 cases of HHCs.

To evaluation of immunogenic risk factors of tuberculosis infection by HLA alleles (DRB1*1051and DQB1*0601). The HLA antigens of the patients and HHCs groups showed significant increased frequencies compared with controls. In patients group, HLA DRB1*1501 allele (54.3 vs. 20%), and in HHCs group, HLA DRB1*1501 allele (30 vs. 20%), while HLA DQB1*1601 allele in patients showed (31.5 vs. 8.5%), and in HHCs group, HLA DQB1*1601 allele (35.7 vs. 8.5%).

KEYWORDS: Tuberculosis, HLA, Drb1*1501, Dqb1*1601