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Association between ABO and Rhesus blood group systems among confirmed human T lymphotropic virus type ١-infected patients in northeast Iran

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Abstract

The distribution of ABO and Rhesus blood group types was investigated in ٩٨٤ randomly selected human T lymphotropic virus-١(HTLV-١)-infected blood donors from April ٢٠٠٤ to March ٢٠٠٧. A total of ١٠٨١ healthy controls admitted for blood donation in this period were enrolled in this study. Infected and control individuals were from the same region and their ABO/Rhesus blood group types were determined by the standard tube test technique. All blood samples were screened for HTLV-١ using an enzyme-linked immunosorbent assay (ELISA) and positive samples were confirmed by Western blot (WB). The unmached analyses showed significant differences in frequency of the A+ blood group between healthy controls and HTLV-١-infected individuals (OR = ٠,٨, ٩٥٪ CI = ٠,٦٦-٠,٩٧) and also a significant association was observed between these two groups (OR = ١,٤٢, ٩٥٪ CI = ١,١-١,٩٩, p = ٠,٠٢١). No significant difference in blood group (A-, B+, B-, O+, O-, and AB-) was observed between cases and controls. It is the first report of an association between HTLV-١-infected patients and ABO/Rh blood groups in our literature review. Our results might suggest that the A+ blood group decrease the risk of HTLV-١ infection in healthy controls, while the AB+ blood group is more frequent in HTLV-١ carriers and increases the risk of HTLV-١ infection. © ٢٠٠٨ Mary Ann Liebert, Inc.

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