Contribution of HLA-DBR1*03 and DRB1*04 in Genetic Susceptibility of Autoimmune Pancreatitis: Preliminary Data

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Context Autoimmune pancreatitis (AIP) is characterized by ductal and periductal inflammatory infiltration, storiform fibrosis, granulocytic-epithelial lesion, IgG4-positive plasmacells and patchy distribution. To date, AIP etiopathogenesis has not be yet elucidated; an immune-mediated pathogenesis has been postulated for AIP, mainly based on response to steroids. Lots of autoimmune diseases (Type 1 diabetes, Graves’ disease, Hashimoto thyroiditis, myastenia gravis, Addison’s disease, rheumatoid arthritis and systemic lupus erythematosus) are associated with HLA-DRB1*03 and -DRB1*04. A genetic predisposition has been also postulated in AIP on the basis of a strong association with HLA-DRB1*04 and -DRB1*04 haplotype and any data are available on caucasian population. Objective The aim of this study is to confirm the role of HLA as genetic background of AIP in Italian population. Methods This is a multicenter, randomized, double-blind study. We enrolled 50 AIP patients (35 males; 15 females) compared with 350 healthy normal controls (176 males; 174 females). Written informed consent was mandatory. DNA typing of HLA was based on the PCR sequence–specific primers (SSP) methodology. Results We found a trend to significativity of HLA-DRB1*04 (OR=2.427; 95% CI=1.277-4.612; P=0.0053, Pearson; P=0.0689, Pc). Moreover, we jointly considered HLA-DBR1*03 and -DRB1*04 haplotype and we found a statistically significant association as previously demonstrated in Type 1 diabetes, Graves’ disease, Hashimoto thyroiditis, myastenia gravis, Addison’s disease, rheumatoid arthritis and systemic lupus erythematosus (OR=18.889; P=0.00046; Fisher test). Conclusion A combined HLA-DBR1*03 and DRB1*04 haplotype is strongly associated with AIP in an Italian population. HLA-DRB1*04 allele may also be associated with AIP in a sample of the Italian population.