HLA-DRB1*07:01 and *08:02 alleles confer a protective effect against ACPA-positive rheumatoid arthritis in a latin american admixed population

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Abstract
HLA-DRB1 shared epitope (SE) alleles are important genetic contributors for the risk of developing anti-citrullinated protein antibodies (ACPA)-positive rheumatoid arthritis (RA), particularly in Caucasians. We aimed to analyze the contribution of HLA-DRB1 alleles and single nucleotide polymorphisms (SNPs) within the major histocompatibility complex (MHC) region to the susceptibility to develop ACPA-positive RA in a Latin American (LA) population with admixed ancestry. A total of 289 ACPA-positive RA patients and 510 controls were enrolled in this study. The presence of HLA-DRB1*04:01, *09:01 and *10:01 was increased in ACPA-positive RA patients compared with healthy controls ($p < 0.0001$, $p < 0.001$ and $p < 0.01$, respectively), whereas DRB1*07:01 and *08:02 was associated with a decreased risk of ACPA-positive RA ($p < 0.001$ and $p < 0.01$, respectively). These results showed a strong correlation with estimates from studies in Asians but not in Caucasian populations. The present study describes the protective effects of the HLA-DRB1*07:01 and *08:02 alleles in ACPA-positive RA patients in a LA population for the first time. Identifying relationships between HLA-DRB1 alleles and RA is important for identifying disease associations in different ethnic groups in order to reach a better understanding of RA worldwide.

Author keywords
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