PTH-100

CTLA4 POLYMORPHISMS IN PRIMARY BILIARY CIRRHOSIS PATIENTS AND FIRST DEGREE RELATIVES OF CRETAN ORIGIN

doi:10.1136/gut.2011.239301.501

A Mantaka,[1] M Koulentaki,[2] O Tsagournis,[2] V Galanakis,[1] E Kouroumalis[1,2,*] *[1]Liver Research Laboratory, University of Crete, Heraklion, Greece; [2]Gastroenterology, University Hospital, Heraklion, Greece*

Introduction and background Cytotoxic T lymphocyte antigen 4 (CTLA4) encodes a coinhibitory immunoreceptor that is a key regulator of self tolerance with established genetic associations to multiple autoimmune diseases. Studies of CTLA4 in PBC identified an association with the G allele of 49AG in Chinese and French patients, but not in the USA, Brazil, UK, Italy and Germany ones.

Aims To examine whether *CTLA-4* CT60 and/or +49A/G polymorphisms are involved in the genetic predisposition to PBC in a genetically homogeneous Cretan population.

Methods The authors studied 91 PBC patients (77 female, 9 AMA-), median age 68 years (41–84 years), Ludwig stage III–IV: 43/91, 101 first degree relatives (FDR, 63 females), median age 40 years (18–80 years), 3/101 AMA+ and 100 healthy controls (76 female), median age 69 years (39–86 years), 16/100 ANA+, all of Cretan origin. After the isolation of genomic DNA from peripheral blood mononuclear cells, *CTLA-4* CT60 and +49A/G polymorphisms were genotyped by restriction fragment length polymorphism with the use of *Bbv*I (+49A/G) and *Nla*III (CT60). Distribution of genotypes and alleles were compared by x^2 test.

Results The genotypes AA, AG and GG of the polymorphism rs231775 of CTLA4 gene were 41 (45.1%), 47 (51.6%) and 3 (3.3%) in the PBC patients, 58 (57.4%), 39 (38.6%) and 4 (4%) in the FDR and 46 (46%), 47 (47%) and 7 (7%) in the control group. No statistical differences were found among groups (PBC vs controls p=0.48, FDR vs controls p=0.23) and no association of the genotypes with disease stage (p=0.178).

The genotypes AA, AG and GG of the genetic polymorphism rs3087243 of CTLA4 gene were 22 (24.1%), 39 (42.9%) and 30 (33%) in the PBC patients, 25 (24.8%), 59 (58.4%) and 17 (16.8%) in the FDR and 24 (24%), 52 (52%) and 24 (24%) in the control group. No statistical differences of the genotypes were found among groups (PBC vs controls p=0.334, FDR vs controls p=0.438) and no association with disease stage (p=0.316).

Conclusions rs3087243 and rs231775 CTLA4 gene polymorphisms have no association with either susceptibility to PBC or disease stage in a genetically homogeneous population of Cretan origin.

Competing interests None.

Keywords CTLA4, primary biliary cirrhosis.