



Osteoprotegerin polymorphisms in Chinese Han patients with rheumatoid arthritis

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ABSTRACT. In order to investigate the association between osteoprotegerin (OPG) gene polymorphisms and rheumatoid arthritis (RA), we studied OPG rs3102735 T/C and rs2073618 G/C polymorphisms in a Chinese Han population comprising 574 patients with RA and 804 controls. Genotyping by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF MS) was conducted. Our data indicated that OPG rs3102735 T/C and rs2073618 G/C polymorphisms were not associated with the risk of RA. However, among older patients (≥ 55 years), patients with the OPG rs3102735 TC (TC vs TT: OR = 0.68, 95%CI = 0.49-0.96, P = 0.029) and TC/CC (TC+CC vs TT: OR = 0.69, 95%CI = 0.49-0.96, P = 0.026) genotypes showed a significantly lower risk of RA than patients with the TT genotype, while patients with the OPG rs2073618 GC (GC vs GG: OR = 1.53, 95%CI = 1.13-2.07, P = 0.006) and GC/CC (GC+CC vs GG: OR = 1.43, 95%CI = 1.07-1.92, P = 0.015) genotypes showed a significantly higher risk of RA than patients with the GG genotype. We

also found a significantly increased risk of RA associated with the OPG rs2073618 GC (GC vs GG: OR = 1.44, 95%CI = 1.07-1.93, P = 0.018) and GC/CC (GC+CC vs GG: OR = 1.39, 95%CI = 1.04-1.86, P = 0.024) genotypes among functional class III+IV patients. Our results were obtained from only a moderate-sized sample and, thus, a larger study with a more diverse ethnic population is needed to confirm these results.

Key words: Osteoprotegerin; Polymorphisms; Rheumatoid arthritis; Molecular epidemiology