



Association between angiogenic growth factor genetic polymorphisms and the risk of osteosarcoma

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ABSTRACT. The aim of this study was to assess the role of the *VEGF* -2578C/A, +936C/T, and -460T/C gene polymorphisms in the development of osteosarcoma. A total of 182 patients with osteosarcoma and 182 age- and gender-matched healthy controls were enrolled into our study during January 2011 and December 2013. Genotype frequencies of the *VEGF* -2578C/A and -460T/C alleles in controls were found to be within the parameters of Hardy-Weinberg equilibrium, but the genotype frequencies of +936C/T alleles were not. By conditional regression analysis, we detected a statistically significantly increased risk of osteosarcoma in patients with the AA genotype (OR = 1.97; 95%CI = 1.02-3.83) and the CA+AA genotype (OR = 1.57; 95%CI = 1.01-2.44) of -2578C/A when compared with CC genotype. Therefore, our study showed that the AA and CA+AA genotypes of the *VEGF* -2578C/A polymorphism might modify the risk of osteosarcoma in a Chinese population.

Key words: VEGF; Polymorphisms; Osteosarcoma