



Correlation between the NPPB gene promoter c.-1298 G/T polymorphism site and pulse pressure in the Chinese Han population

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ABSTRACT. The aim of this study was to investigate the correlation between the natriuretic peptide precursor B (NPPB) gene single nucleotide polymorphism (SNP) c.-1298 G/T and pulse pressure (PP) of the Chinese Han population and the association between genotype and clinical indicators of hypertension. Peripheral blood was collected from 180 unrelated patients with hypertension and 540 healthy volunteers (control group), and DNA was extracted to amplify the

5'-flanking region and 2 exons of the NPPB gene by polymerase chain reaction; the fragment was sequenced after purification. The clinical data of all subjects were recorded, the distribution of the NPPB gene c.-1298 G/T polymorphism was determined, and differences in clinical indicators between the two groups were evaluated. The mean arterial pressure PP, and creatinine levels were significantly higher in the hypertension group than in the control group ($P < 0.05$), but no other clinical indicators differed between the groups. There were no significant differences in genotype frequency and distribution of the NPPB gene c.-1298 G/T polymorphism between the hypertension group and the control group ($P > 0.05$); in the control group, the mean PP of individuals with the SNP c.-1298 GG genotype was greater than that of individuals with the GT+TT genotype ($P < 0.05$). In conclusion, there was no significant correlation between the NPPB gene c.-1298 G/T polymorphism and the incidence of essential hypertension in the Han population; however, the PP of the SNP c.-1298 GG genotype was greater than that of the GT+TT genotype in the control group.

Key words: NPPB gene; Polymorphism; Essential hypertension; Pulse pressure