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Single-nucleotide polymorphism of the pri-miR-34b/c gene is not associated with susceptibility to congenital heart disease in the Han Chinese population

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ABSTRACT. Recent evidence has shown that the microRNA polymorphism may play an important role in the susceptibility to congenital heart disease (CHD). A potentially functional SNP rs4938723 (T>C) in the promoter region of pri-miR-34b/c might affect transcription factor GATA binding and therefore pri-miR-34b/c expression. We genotyped the pri-miR-34b/c polymorphism in a case-control study of 590 patients and 672 controls in a Han Chinese population and assessed the effects of the pri-miR-34b/c polymorphism

on CHD susceptibility by TaqMan SNP genotyping assay. There was no association between the pri-miR-34b/c polymorphism and the risk of CHD in both genotype and allelic frequency. In a subsequent analysis of the association between this polymorphism and CHD classification, there was still no significant difference in both genotype and allelic frequency. Our results suggest that the pri-miR-34b/c polymorphism rs4938723 is not associated with susceptibility to sporadic CHD in the Han Chinese population.

Key words: Congenital heart disease; pri-miR-34b/c; Susceptibility; Single-nucleotide polymorphism

