



## Association of *PTPN22* gene polymorphism with type 1 diabetes mellitus in Chinese children and adolescents

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**ABSTRACT.** Previous studies have indicated that the protein tyrosine phosphatase nonreceptor type 22 gene (*PTPN22*) is associated with type 1 diabetes (T1DM) in the Caucasian population. In the present study, we investigated the relationship between *PTPN22* genetic polymorphisms and T1DM in Chinese children. A total of 202 children and adolescents with T1DM and 240 healthy control subjects of Chinese Han origin were included in our analysis. Polymerase chain reaction-restriction fragment length polymorphism was used to determine the presence of the C1858T polymorphism in the *PTPN22* gene. We found that the TT +TC genotype and the T allele of C1858T were more frequent in T1DM patients (19.40 and 10.0%, respectively) than in healthy subjects (7.51 and 4.0%, respectively), and the difference was significant (both  $P < 0.001$ ). After adjusting for confounding variables such as gender, age, and family history of T1DM, the difference remained significant ( $P = 0.007$ , odds ratio = 2.88, 95% confidence interval 1.76-4.32). Our results indicate that genetic polymorphisms in the *PTPN22* gene may increase the risk of T1DM in Chinese children and adolescents.

**Key words:** Adolescent; Children; Type 1 diabetes mellitus; *PTPN22*