

***ITPKC* GENE SINGLE NUCLEOTIDE POLYMORPHISM (RS28493229) ASSOCIATED WITH CORONARY ARTERY ANEURYSM FORMATION BUT NOT SUSCEPTIBILITY IN PATIENTS WITH KAWASAKI DISEASE IN A TAIWANESE POPULATION**

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Background: Kawasaki disease is characterized by systemic vasculitis with unknown etiology. Previous studies from Japan indicated that gene *ITPKC* is responsible for susceptibility to KD; however, the replication studies in the Taiwanese population were still controversial.

Subjects and methods: *ITPKC* polymorphism was conducted on 1531 Taiwanese subjects (341 KD patients and 1190 controls). The genotypes of *ITPKC* were determined by TaqMan. Hardy-Weinberg equilibrium for cases and controls was checked and genetic effects were evaluated by the Chi-square (χ^2) test.

Result: No significant association was noted between the genotypes and allele frequency of the *ITPKC* polymorphism (rs28493229) in the controls and KD patients. In KD patients with CAL formation, although the CC genotype of *ITPKC* gene SNP rs28493229 was overrepresented, it did not reach the significance. Additionally, rs28493229 had not association with intravenous immunoglobulin (IVIG) treatment response in KD patients. Importantly, a significant association was obtained between rs28493229 and KD patients with aneurysm formation ($P = 0.001$, under the recessive model).

Conclusions: In this study, our results indicated that C-allele of *ITPKC* SNP rs28493229 is associated with aneurysm formation in KD patients in a Taiwanese population.