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Meta-Analysis of *C242T* polymorphism in *CYBA* genes: Risk of Acute Coronary Syndrome is lower in Asians but not in Caucasians

Key words: *CYBA*, *C242T* polymorphism, Acute coronary syndrome

Research Summary

This meta-analysis mainly focused on the association between the C242T polymorphism and ACS

Table 4 Results of meta-analysis for CYBA gene C242T polymorphism and acute coronary syndrome

Genotype contrasts	Population	study number (case/control),n(n/n)	Model for analysis	OR (95% CI)	$P_{heterogeneity}$	I^2 (%)	P value
Allele comparison	Total	10(6102/8669)	REM	0.91 (0.78, 1.05)	<0.001	74	0.18
(T versus C)	Asian	4 (2536/5550)	FEM	0.73 (0.64, 0.83)	0.18	39	<0.001
	Caucasian	6 (3566/3119)	FEM	1.06 (0.99, 1.14)	0.33	13	0.11
Dominant model	Total	10(6102/8669)	REM	0.90 (0.75, 1.07)	<0.001	71	0.22
(TT+CT versus CC)	Asian	4 (2536/5550)	FEM	0.71 (0.62, 0.82)	0.21	34	<0.001
	Caucasian	6 (3566/3119)	FEM	1.07 (0.97, 1.19)	0.47	0	0.16
Recessive model	Total	10(6102/8669)	FEM	1.04 (0.91, 1.18)	0.19	27	0.58
(TT versus CT+CC)	Asian	4 (2536/5550)	FEM	0.63 (0.39, 1.02)	0.31	16	0.06
	Caucasian	6 (3566/3119)	FEM	1.08 (0.94, 1.24)	0.33	13	0.26
Homozygote	Total	10(6102/8669)	FEM	1.05 (0.91, 1.21)	0.07	43	0.51
comparison	Asian	4 (2536/5550)	FEM	0.57 (0.35, 0.92)	0.2	35	0.02
(TT versus CC)	Caucasian	6 (3566/3119)	FEM	1.11 (0.96, 1.29)	0.27	21	0.16

OR: Odds ratio; 95% CI: 95% confidence interval; REM: random-effects model; FEM: fix-effects model.

Innovation points

● Our results suggest that the *C242T* polymorphism might be a protective factor against developing ACS in the Asian population

● In the overall population and especially with Caucasians, no significant association was uncovered

● Further researches will be needed to identify the confounding factors which modified the protective effect of T allele among Caucasians.