



Association between Ser311Cys polymorphism in the dopamine D2 receptor gene and schizophrenia risk: a meta-analysis in Asian populations

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Genet. Mol. Res. 11 (1): 261-270 (2012)

Received April 20, 2011

Accepted November 10, 2011

Published February 8, 2012

DOI <http://dx.doi.org/10.4238/2012.February.8.1>

ABSTRACT. Numerous studies have evaluated the association between Ser311Cys (rs1801028, C>G) polymorphism of the dopamine D2 receptor (DRD2) gene and schizophrenia risk. However, the specific association is still controversial. We examined whether DRD2 Ser311Cys polymorphism confers schizophrenia risk in Asian popu-

lations. Sixteen studies were retrieved reporting on a total of 2268 schizophrenia patients and 2423 healthy controls. Meta-analysis of the results showed significant associations between Ser311Cys polymorphism and schizophrenia risk in the comparisons of G versus C (odds ratio (OR) = 1.47, 95% confidence interval (CI) = 1.18-1.83, P = 0.0006) and CG+GG versus CC (OR = 1.45, 95%CI = 1.16-1.82, P = 0.001). In a subgroup analysis by nationality, we found a significant association between Ser311Cys polymorphism and schizophrenia risk in the comparisons of G versus C and CG+GG versus CC genotype in the Japanese population (OR = 1.75, 95%CI = 1.30-2.35, P = 0.0002; OR = 1.72, 95%CI = 1.27-2.33, P = 0.0004; respectively) but not in Chinese and Indian populations. In conclusion, the G allele of DRD2 Ser311Cys polymorphism involves a potential risk factor for schizophrenia in Asian populations, especially in the Japanese population.

Key words: Dopamine D2 receptor; Gene polymorphism; Schizophrenia; Meta-analysis