



Association of A-20C polymorphism in the angiotensinogen gene with essential hypertension: a meta-analysis

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ABSTRACT. The A-20C polymorphism in the angiotensinogen (AGT) gene has been associated with increased risk of essential hypertension in several studies; however, these studies gave inconsistent results. In this study, we performed a meta-analysis to assess the association between AGT A-20C polymorphism and essential hypertension. Published literature was retrieved from PubMed. Pooled odd's ratio (OR) with 95% confidence interval (CI) was calculated using fixed- or random-effect models. A total of 10 case-control studies containing 3653 cases and 3457 controls were enrolled to this meta-analysis. In a combined analysis, the results showed a significant association between the AGT A-20C polymorphism and risk of essential hypertension (AA vs CC: OR = 0.62, 95%CI = 0.46-0.84; recessive model: OR = 0.66, 95%CI = 0.49-0.88). In the subgroup analysis

stratified by race, significant associations were found between the *AGT* A-20C polymorphism and essential hypertension risk in Asians (AA vs CC: OR = 0.59, 95%CI = 0.43-0.80; recessive model: OR = 0.63, 95%CI = 0.46-0.85). In conclusion, the results of this meta-analysis suggested that the *AGT* A-20C polymorphism was associated with risk of essential hypertension in Asians.

Key words: Angiotensinogen gene; Essential hypertension; Meta-analysis; Polymorphism; A-20C