Association between the rs3795879 G/A polymorphism of the SERPINE2 gene and chronic obstructive pulmonary disease: a meta-analysis

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ABSTRACT. The present study aimed to investigate the effects of the rs3795879 polymorphism of the SERPINE2 gene on the development of chronic obstructive pulmonary disease (COPD) based on a systematic meta-analysis. An extensive literature search was performed to retrieve previously published case-control studies on the polymorphisms of SERPINE2 in COPD patients. Odds ratios (ORs) with 95% confidence intervals (CIs) were used to assess the association between SERPINE2 polymorphisms and risk of developing COPD. A total of 5 studies including 3034 COPD cases and 3068 controls were incorporated in the present meta-analysis. Generally, no significant association was identified between the rs3795879 polymorphism of SERPINE2 and the risk of developing COPD (G allele vs A allele: OR = 1.23, 95%CI = 0.97-1.32; GG vs GA: OR = 1.19, 95%CI = 0.81-1.76; GG vs AA: OR =
1.23, 95%CI = 0.89-1.70; dominant model: OR = 1.18, 95%CI = 0.85-1.62; recessive model: OR = 1.19, 95%CI = 0.85-1.66). In addition, subgroup analyses according to different ethnicities and the source of controls suggest no statistically significant association between the rs3795879 polymorphism of SERPINE2 and COPD risk. The results suggest that the rs3795879 polymorphism of SERPINE2 is not a risk factor for COPD.

**Key words:** SERPINE2; rs3795879; SNP; COPD; Meta-analysis