



Association between alcohol dehydrogenase 1C gene *1/*2 polymorphism and pancreatitis risk: a meta-analysis

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ABSTRACT. Numerous studies have focused on the relationship between alcohol dehydrogenase 1C gene (*ADH1C*) *1/*2 polymorphism (Ile350Val, rs698, also known as *ADH1C* *1/*2) and pancreatitis risk, but the results have been inconsistent. Thus, we conducted a meta-analysis to more precisely estimate this association. Relevant publications were searched in several widely used databases and 9 eligible studies were included in the meta-analysis. Pooled odds ratios (ORs) and 95% confidence intervals (CIs) were calculated to evaluate the strength of the association. Significant associations between *ADH1C* *1/*2 polymorphism and pancreatitis risk were observed in both overall meta-analysis for 12 vs 22 (OR = 1.53, 95%CI = 1.12-2.10) and 11 + 12 vs 22 (OR = 1.44, 95%CI = 1.07-1.95), and the chronic alcoholic pancreatitis subgroup for 12 vs 22 (OR = 1.64, 95%CI = 1.17-2.29) and 11 + 12 vs 22 (OR = 1.53, 95%CI = 1.11-2.11). Significant pancreatitis risk variation was also detected in Caucasians for 11 + 12 vs 22 (OR = 1.45, 95%CI = 1.07-1.98). In conclusion, the *ADH1C* *1/*2 polymorphism

is likely associated with pancreatitis risk, particularly chronic alcoholic pancreatitis risk, with the *1 allele functioning as a risk factor.

Key words: Alcohol dehydrogenase 1C; Meta-analysis; Pancreatitis risk; Polymorphism