9th Yazd International Congress and Student Award on Reproductive Medicine with 4th Congress of Reproductive Genetics

Poster Presentations

P-126

Factor V Leiden 1691G>A mutation and recurrent pregnancy loss risk: Evidence from meta-analysis and meta-regression analysis

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Background: Although numerous case-control studies have attempted to determine the association between factor V Leiden (FVL) 1691G>A mutation and susceptibility to recurrent pregnancy loss (RPL), there have been confliction among the results of various ethnic groups.

Objective: To address this limitation, here we implemented meta-analysis to provide with consistent conclusion of the association between FVL 1691G>A mutation and RPL risk.

Materials and Methods: After a systematic literature search, pooled odds ratio (OR) and their corresponding 95% confidence interval (CI) were used to evaluate the strength of the association.

Results: In this meta-analysis, 61 studies, containing 10255 cases and 9269 controls, were included in quantitative analysis. Overall population analysis revealed a significant positive association in the dominant (OR = 2.11, 95% CI = 1.81-2.47, p < 0.001, FEM), over-dominant (OR = 1.88, 95% CI = 1.61-2.19, p < 0.001, FEM), allelic (OR = 2.08, 95% CI = 1.81-2.40, p < 0.001, REM), and heterozygote (OR = 1.97, 95% CI = 1.68-2.30, p < 0.001, FEM) models. Moreover, a significant association of dominant (OR = 2.97, 95% CI = 1.93-4.57, p < 0.001, FEM), over-dominant (OR = 2.58, 95% CI = 1.65-4.02, p < 0.001, FEM), allelic (OR = 2.82, 95% CI = 1.31-6.04, p < 0.001, REM), and heterozygote (OR = 2.67, 95% CI = 1.71-4.18, p < 0.001, FEM) models was found in the Iranian population. The subgroup analysis, indicated strong significant association in Asian, European, and Africa population, but not in Americans.

Conclusion: The FVL 1691G > A mutation and the risk of RPL confers a genetic contributing factor in increasing the risk of RPL, particularly in Iranians, except for Americans.

Key words: *Recurrent pregnancy loss, Factor V Leiden, 1691G>A mutation, Meta-analysis.*

The original full text of this abstract has been published in Thrombosis Journal 2020; 18(1): 1-6. 8:11.https://doi.org/10.1186/s12959-020-00224-z.

How to cite to this article: *Eslami MM, Khalili MA, Soufizomorrod M, Abroun S, Razi B. Factor V Leiden 1691G>A mutation and the risk of recurrent pregnancy loss (RPL): systematic review and meta-analysis. Thrombosis Journal 2020; 18(1): 1-6.*