

Null effect of p53 codon 72 polymorphism on recurrent pregnancy loss and recurrent implantation failure: A summative assessment

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Sir,

An important problem in reproductive medicine is infertility. Many genetic disorders are mentioned as possible causes of human reproductive problem.^[1,2] p53 codon 72 polymorphism is a genetic factor that is widely mentioned for its relationship with recurrent pregnancy loss and recurrent implantation failure.^[3,4] However, the exact relationship is still controversial.

Here, the author performed a summative assessment and meta-analysis on the collected data to answer the question whether this polymorphism contribute to the problem of recurrent pregnancy loss and recurrent implantation failure or not.

This work is designed as a meta-analysis. The author performed a literature review to collect papers describing on p53 codon 72 polymorphism and its relationship with recurrent pregnancy loss and recurrent implantation failure. The searching was performed based on the

standard referencing database, PubMed. The key words searched include “p53”, “codon 72”, “recurrent pregnancy loss” and “recurrent implantation failure”. The papers with complete data in English were included for further meta-analysis.

A summative assessment on the number of subjects in each case and control group for each type of p53 codon 72 polymorphism was done. The correlation between p53 codon 72 polymorphism and the problem of reproduction, recurrent pregnancy loss and recurrent implantation failure was assessed by Chi-square test. *P*-value equal to or less than 0.05 is accepted as the statistical significant level in this work. In this study, a meta-analysis of two published reports addressing the same topic is performed.^[3,4] There were 372 cases (302 recurrent pregnancy losses and 70 recurrent implantation failures) and 57 controls. There was no correlation between p53 codon 72 polymorphism and the studied problems of reproduction, recurrent pregnancy loss and recurrent implantation failure ($P > 0.05$).

It is no doubt that p53 is an important gene in medicine since it has proven relationships with cancer, longevity, reproduction, etc.^[5] A genetic polymorphism, polymorphism of p53 codon 72, is widely studied for its role in reproductive medicine. However, the results on the correlation between polymorphism and abnormalities, recurrent pregnancy loss and recurrent implantation

failure, are still inconclusive.^[3,4] Hence, it is required for a systematic assessment on this topic. Here, a meta-analysis on the published data was performed and it reaches to the conclusion that there is null effect of the studied polymorphism on recurrent pregnancy loss and recurrent implantation failure. Indeed, this work can be a good supporting evidence to another report by the author on this specific polymorphism analysis by gene ontology technique (data submitted to Iranian Journal of Reproductive Medicine).

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