INPLASY PROTOCOL

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Conflicts of interest:
None declared.

Association of IL-17 and IL-27 Polymorphisms with Susceptibility to Recurrent Pregnancy Loss and Preeclampsia: A Systematic Review and Meta-Analysis

Ma, Y[1]; Ye, SL[2]; Liu, YY[3]; Zhao, XQ[4]; Wang, YQ[5].

Review question / Objective: **This study evaluates the association between IL-17 and IL-27 polymorphisms and the risk of recurrent pregnancy loss and preeclampsia.**
Condition being studied: **It was found that IL-17 was significantly increased in patients with recurrent spontaneous abortion and preeclampsia compared with normal pregnant women, while IL-27 levels were significantly higher in peripheral blood of PE patients than in normal pregnant women, suggesting that IL-17 and IL-27 may play an important role in the development and progression of immune-related pregnancy complications. Several studies have evaluated the association of IL-17 and IL-27 polymorphisms with preeclampsia or recurrent miscarriage, but there are great differences among study results.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 02 December 2022 and was last updated on 02 December 2022 (registration number INPLASY2022120007).

INTRODUCTION

Review question / Objective: **This study evaluates the association between IL-17 and IL-27 polymorphisms and the risk of recurrent pregnancy loss and preeclampsia.**

Condition being studied: **It was found that IL-17 was significantly increased in patients with recurrent spontaneous**

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abortion and preeclampsia compared with normal pregnant women, while IL-27 levels were significantly higher in peripheral blood of PE patients than in normal pregnant women, suggesting that IL-17 and IL-27 may play an important role in the development and progression of immune-related pregnancy complications. Several studies have evaluated the association of IL-17 and IL-27 polymorphisms with preeclampsia or recurrent miscarriage, but there are great differences among study results.

METHODS

Participant or population: Patients with pre-eclampsia or recurrent miscarriage.

Intervention: IL-17 and IL-27 polymorphisms.

Comparator: Normal pregnant women.

Study designs to be included: case-control studies.

Eligibility criteria: The case group should be patients with pre-eclampsia or recurrent miscarriage and excluding miscarriages with a clear etiology such as autoimmune, reproductive tract abnormalities, and chromosomal abnormalities, and the control group should be normal pregnant women.

Information sources: PubMed, EMBASE, Cochrane, Web of Science, and Google Scholar.

Main outcome(s): The disease susceptibility.

Quality assessment / Risk of bias analysis: The quality of the literature will be assessed using the Newcastle-Ottawa Scale (NOS).

Strategy of data synthesis: RevMan 5.4.1 will be used to perform the analysis. Q statistic test and an I2 test will be performed to assess the between-study heterogeneity. When the Q test is significant ($P < 0.05$) or $I2 > 50\%$, the random effects model will be used, otherwise, the fixed effects model will be used.

Subgroup analysis: The group will be divided into preeclampsia and recurrent spontaneous abortion groups according to the type of disease.

Sensitivity analysis: The Revman software will be applied to sequentially remove data from individual studies to assess the effect of individual studies on the pooled ORs.

Country(ies) involved: China.

Keywords: polymorphism; preeclampsia; recurrent pregnancy loss.

Contributions of each author:
Author 1 - Yue Ma.
Author 2 - Shenglong Ye.
Author 3 - Yuanying Liu.
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Author 5 - Yongqing Wang.

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