

# IL-6, IL-10 and IL-17 Gene Polymorphisms in Iranian Women with Recurrent Miscarriage

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## ABSTRACT

**Background:** Pro-inflammatory and anti-inflammatory cytokines and polymorphisms of their genes have been described to be involved in the pathogenesis of recurrent miscarriage (RM). **Objective:** To investigate the association between RM and five polymorphisms of cytokine genes, interleukin 10 (IL-10), (-592 A/C, -819 C/T, -1082 A/G), IL-6 (-174 C/G) and IL-17 (-197 G/A) in Iranian women. **Method:** Polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) was performed to determine the frequencies of the IL-6, IL-10 and IL-17 gene polymorphisms in 85 women with RM compared with 104 healthy controls. **Results:** The frequencies of IL-10 promoter gene polymorphisms (-592 A/C and -819 C/T) were significantly higher in RM women than those in controls ( $p=0.003$ ). However, no statistically significant differences were observed in the frequencies of IL-6 (-174 C/G), IL-10 (-1082 A/G) and IL-17 (-197 G/A) polymorphisms between RM women and controls. **Conclusion:** These results suggest that IL-10 gene polymorphism screening might have some relevance in patients with RM, a suggestion which requires further studies.

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**Keywords:** Cytokine, Gene Polymorphism, PCR-RFLP, Recurrent Miscarriage

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