Renin-Angiotensin A1166C Polymorphism and the Risk of Recurrent Spontaneous Abortion in Iranian Patients

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Background: Recurrent spontaneous abortion is a multifactorial disease.The occurrence of recurrent miscarriage has been estimated 1-3% of couples.At least 50 percent of abortions are frequently unknown origin.The renin-angiotensin systemis a hormonal system. It is possible that one of the genes in renin-angiotensin system effects on this disease.*AGTR1* receptor is dominant receptor in this system, so has a central role in function of renin-angiotensin system.The study sought to investigate whether exists any relationship between A1166C mutation in *AGTR1* gene with Iranian patients of recurrent spontaneous abortion.

Methods: In this study, 110 females with at least 3 abortions experiences were compared to 105 females with no abortion histories by T-ARMS-PCR.

Results: Among the patients, the frequency of genotypes was AA (% 70), AC (% 28) and CC (% 1/8). The genotype frequency of control cases were 89 AA (% 84/7), 16 AC (% 15/2) (*P*=0.008)and CC (% 0).

Conclusion and discussion: Our results show significant relationship between polymorphism of *AGTR1* A1166C with idiopathic recurrent spontaneous abortion in Iranian women.

Keyword: Recurrent spontaneous abortion, Renin-angiotensin system, *AGTR1 gene*, A1166C polymorphism