

عنوان مقاله:

Endothelial nitric oxide synthase haplotypes are significantly associated with risk of essential hypertension

محل انتشار:

سومین کنگره بین المللی و پانزدهمین کنگره ملی ژنتیک ایران (سال: 1397)

تعداد صفحات اصل مقاله: 1

نویسندگان:

Azim Nejatizadeh - *Molecular Medicine Research Center, Hormozgan University of Medical Sciences, Bandar Abbas, Iran*

Zahra Farbood - *Molecular Medicine Research Center, Hormozgan University of Medical Sciences, Bandar Abbas, Iran*

Hossein Farshidi - *Hormozgan CardioVascular Research Center, Hormozgan University of Medical Sciences, Iran*

Mohammad Shekari - *Molecular Medicine Research Center, Hormozgan University of Medical Sciences, Bandar Abbas, Iran*

خلاصه مقاله:

Background: Nitric Oxide (NO) a potent vasodilator plays a pivotal role in blood pressure regulation. Evidences suggested that eNOS gene polymorphisms are associated with essential hypertension (EHT). We examined the potential association of 4a/4b, A922G, G894T, T786C eNOS gene polymorphisms with EHT in the southern population of Iran. Methods: 200 Iranian patients with EHT and 200 normotensive subjects were included. After collecting demographic data, polymerase chain reaction was used to determine genotype of 4a/4b polymorphism, and three other polymorphisms were analyzed by restriction fragment length polymorphism- polymerase chain reaction method (PCR-RFLP). Pairwise, ternary, and foursome haplotype analysis conducted to reveal their association with EHT. Association was determined by logistic regression analysis. Results: our results demonstrated statistically significant associations between T786C, G894T, and 4a/4a and the disease ($P < 0.001$) with an increased risk of hypertension (OR = 2, OR = 3.8, OR = 1.6, respectively), however, A922G variant had no significant association. 786C/922A, 786C/922G, 786C/4a, 786C/894T, 922A/4a, and 922G/4a haplotypes were associated an increased risk of hypertension, while 786T/922A, 786T/922G, 786T/894T, and 922A/4b were reversely associated ($P < 0.001$). Moreover, Ternary haplotype analysis revealed that 786C/922A/4a, 786C/922A/4b, and 786C/922G/4b haplotypes are significantly associated with hypertension while 786T/922G/4a and 786T/922G/894T haplotypes demonstrate protective effects against hypertension ($P < 0.001$). Conclusion: The 4b/4a and 786T/C polymorphisms emerged as the determinants modifying the risk of hypertension. The 786T/C, 4b/4a and 894G/T polymorphisms, individually and as haplotypes, associated significantly with risk of hypertension. The susceptible haplotypes were associated with an increased risk of hypertension.

کلمات کلیدی:

Hypertension; NOS3; polymorphisms; haplotypes

لینک ثابت مقاله در پایگاه سیویلیکا:

