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Title:

**Association between promoter region of the uPAR
(rs344781) gene polymorphism in genetic susceptibility
to migraine without aura in three Iranian hospitals**

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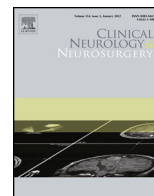
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Association between promoter region of the uPAR (rs344781) gene polymorphism in genetic susceptibility to migraine without aura in three Iranian hospitals



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A B S T R A C T

Introduction: Migraine is a chronic neurological disorder. Inflammation has a key role in migraine pathophysiology. Urokinase plasminogen activator receptor (uPAR) directly involves in inflammatory conditions by facilitating migration of inflammatory cells to different tissues. The aim of this study was to investigate whether uPAR rs344781, common genetic polymorphism in the uPAR promoter region, might be associated with migraine without aura susceptibility in an Iranian population.

Methods: We enrolled 103 newly diagnosed patients with migraine and 100 healthy controls. Peripheral blood sample was used for DNA extraction and uPAR rs344781 gene polymorphism was determined. Patients filled HIT-6 as a tool to evaluate headache severity.

Results: The genotype frequency of uPAR is significantly different between migraine patients and control subjects. Heterozygote genotype (AG) was statistically more frequent in the patients than the controls ($P=0.001$; OR=2.67, 95% CI=1.51–4.7). Also G allele was more frequent in the patients. Total HIT-6 score was not significantly different between heterozygote and homozygote patients (55.50 ± 2.22 vs. 49.60 ± 3.68 respectively, $P=0.075$).

Conclusion: In conclusion, our study showed a significant association between uPAR rs344781 gene promoter polymorphism and migraine without aura susceptibility but not with headache severity.

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