

Effect of ACE gene polymorphism of Iraqi patients on ischemic stroke

Moaed E. Al-Gazally¹, Ahmed F. Obed², Ali H. Al-Saadi³

¹Clinical Biochemistry Department, College of Medicine, University of Babylon, P.O. box 473 Hilla, Iraq.

²MSc. pharmacy, Ministry of Health, Iraq.

³Biology Department, College of Science, University of Babylon, P.O. box 473, Hilla, Iraq

Abstract: Objectives: Evaluate the polymorphism of angiotensin converting enzyme gene as an independent risk factor for ischemic stroke in Iraqi population.

Design and methods: the study was conducted on (60) patients with acute ischemic stroke and (30) apparently healthy subjects were taken as control group. The ACE genotyping was performed using allele specific polymerase chain reaction.

Results: Genotypes of ACE gene determined by PCR technique were defined as DD, II and ID according to the presence of the D (deletion) and I (insertion) alleles. There was statistically significant difference in both the genotypic distribution and allelic frequency between the patients versus healthy controls (O.R. = 4.35 , CI_{95%} 1.05 - 18.03) of the DD genotype and D allele making them consider as an independent risk factors for ischemic stroke.

Conclusion: DD genotype and D allele of ACE gene can be considered as an independent risk factors for ischemic stroke, hence the significant association between DD genotype and D allele with ischemic stroke suggested by our study.

Key words : Ischemic stroke, Angiotensin converting enzyme gene , polymerase chain reaction , polymorphism.