



Effect of homocysteine on ischemic stroke and myocardial infarction in Iraqi population

Moaed E. Al-Gazally¹, Ali H. Al-Saadi², Asmaa H. Radeef³

¹Clinical Biochemistry Dept., College of Medicine, University of Babylon,
P.O. Box 473, Hilla, Iraq

²Biology Dept. , College of Science , University of Babylon , P.O. Box 473,Hilla,Iraq.

³MSc. Pharmacy, Ministry of Health, Iraq.

Abstract: Objectives: Evaluate the effect of Plasminogen activator inhibitor on ischemic stroke and myocardial infarction in Iraqi population.

Design and Methods:the study was conducted on (60) patients, (30) patients with acute ischemic stroke and (30) patients with acute myocardial infarction, and (30) apparently healthy subjects were taken as control group.

The level of homocysteine was determined using Enzyme linked immunosorbent assay.

The methylene tetra hydro folate reductase genotyping was performed using Restriction Fragment Length Polymorphism Polymerase Chain Reaction (RFLP-PCR) technique.

Results: Both ischemic stroke and myocardial groups had significantly higher level of homocysteine ($P < 0.01$).

According to methylene tetra hydro folate reductase gene, a C677T polymorphism was detected by using polymerase chain reaction restriction fragmentation length polymorphism. The alleles were designated as CC, CT and TT. There was statistically no significant difference in both the genotypic distribution and allelic frequency between both patient groups versus healthy controls. However the present study showed that subjects with TT genotype had the highest level of homocysteine in all study groups, while subjects with CC genotype had the lowest level of homocysteine in all study groups.

Conclusion: Homocysteine may consider as an independent risk factor for ischemic stroke and myocardial infarction.

Key words: Homocysteine, ischemic stroke, myocardial infarction, genetic polymorphism, plasminogen activator inhibitor, methylene tetra hydro folate reductase gene.

Moaed E. Al-Gazally *et al* /Int.J. PharmTech Res. 2015,8(10),pp 139-145.

www.sphinxsai.com
