



Investigate the presence of a SNP in the methylenetetrahydrofolate reductase gene in PCOS patients with Dyslipidemia in Al-Najaf Al-Ashraf province

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Abstract: Objectives: Polycystic ovary syndrome (PCOS) is the most predominant heterogeneous endocrine disorder in premenopausal women with anonymous etiology. This study was done to find out if there was association between methylenetetrahydrofolate reductase polymorphism gene (MTHFR) polymorphism (C677T) in the codon 222 (substitution of alanine to valine) and PCOS patients with dyslipidemia in Al-Najaf Al-Ashraf province.

Methods: This study was carried out during the period from April 2015 till May 2016, and included forty-six PCOS female patients with Dyslipidemia. Control group consists from twenty-five healthy age – matched women; all were without clinical manifestation of any disease. Serum cholesterol, triglyceride, LDL and HDL estimation was done. Polymerase chain reaction-restriction fragment length polymorphism technique was used to estimate genotyping of the C677T methylenetetrahydrofolate reductase gene polymorphism.

Results: Allelic distributions of SNP (C677T) in the (MTHFR) gene showed no significant difference ($p > 0.05$) between PCOS patients with dyslipidemia (CC: $n = 35$, 76.09%; CT: $n = 9$, 19.56%; TT: $n = 2$, 4.35%) and controls (CC: $n = 22$, 88%; CT: $n = 3$, 12%; TT: $n = 0$).

Conclusion: The MTHFR gene C677T polymorphism plays no role in PCOS female patients with Dyslipidemia.

Keywords: PCOS, MTHFR, polymorphism, dyslipidemia.