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Poster Presentations

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Polymorphism of hormone-sensitive lipase C-60G in obese and non-obese polycystic ovary syndrome patients

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Background: Polycystic ovary syndrome (PCOS) is a common endocrine-metabolic disorder in women of reproductive age. Since most PCOS patients are obese, abnormal lipid metabolism has an essential role in the pathological development of PCOS. Hormone-sensitive lipase (HSL) is an intracellular lipase that has a crucial role in normal lipid metabolism.

Objective: This study aimed to assess the frequency of C-60G polymorphism of HSL in healthy women and PCOS women.

Materials and Methods: 324 women with PCOS and 144 healthy controls were enrolled in this study. All subjects were further divided into Non-PCOS and

body mass index (BMI) ≥ 25 (n = 72), PCOS and BMI ≥ 25 (n = 197), Non-PCOS and BMI < 25 (n = 67) and PCOS and BMI < 25 (n = 117) subgroups. Biochemical parameters were measured and the genotypes of C-60G polymorphism of the *HSL* gene were determined using PCR-restriction fragment length polymorphism techniques.

Results: Age, BMI, Insulin, HOMA-IR, FT, and follicle-stimulating hormone levels were significantly different between subgroups. Our results have shown that there was no significant difference between fasting blood sugar, triglyceride, serum total cholesterol, luteinizing hormone low-density lipoprotein, and high-density lipoproteins levels in cases and controls. The genotypic and allelic frequencies of HSL showed no significant differences between PCOS – with BMI ≥ 25 and/or BMI < 25 - and non-PCOS subjects.

Conclusion: According to the obtained results, the C-60G polymorphism in the HSL promoter was not associated with PCOS and BMI.

Key words: Polycystic ovary syndrome, Hormone-sensitive lipase, Polymorphism.