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Ultrasonographic finding in women with polycystic ovary syndrome in correlation with their FSH gene polymorphism

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Abstract : PCOS is the most public reason of anovulation, sterility and hyperandrogenism in women, disturbing between five and ten percentage of women of generative age worldwide. Therefore the study focused on these cases and aimed to Ultrasonographic finding in women with polycystic ovary syndrome in correlation with their FSH gene polymorphism. "In current study thirty specimens were collected from 30 women patients (PCOS) and 30 healthy between 23 and 48 years old and examined using Ultrasonographic imaging, hormonal analysis and DNA samples from peripheral blood lymphocytes were extracted and analyzed by PCR-RFLP of FSH gene by digested with BsrI, an endonuclease that recognized the A to G transition sites at position 680 codon". Imaging of Ultrasonographic appears that all the women patients in the study gave positive results with PCOS to all cases were obtained from women patients.Then blood was collected for hormonal assay the results revealed decrease in serum LH levels with a concentration increase in follicular stimulating hormone FSH level at thewhen compared with control.The targeted fragment contains one restriction site for an endonuclease there are three possible patterns were expected (AA, GG, AG) genotype. As related with AA genotype, there are no significant differences between control group and pcos patients group, while, GA genotype frequency was significantly ($p<0.05$) higher in the control group than PCOS patients (15 *versus* 28%, respectively; X^2=4.175). In contrast, GG genotype frequency was significantly ($p<0.05$) higher in the PCOS patients group. The Allele frequencies of A and G alleles were 42% and 58% in the PCOS patients group, 52% and 48% in the control group respectively. This study concluded that when compare between hormonal and ultrasound data and molecular approach the Ultrasonographic imaging was the good and efficient methods for detection the PCOS in women patients.

Keywords: Ultrasonographic imaging, *FSH*, Polymorphism, PCOS.

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