



CORRELATIONS OF VITAMIN D LEVEL WITH HORMONAL AND

BIOCHEMICAL PARAMETERS IN POLYCYSTIC OVARY SYNDROME

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Objective: To investigate the level of 25(OH) Vitamin D (25(OH)D) and correlation between 25(OH)D level and hormonal-biochemical parameters in Polycystic ovary syndrome (PCOS).

Material- method: Thirty three patients diagnosed with PCOS and 42 age and body mass index matched control group admitted to Erzurum Regional Training and Research Hospital from May to October were included in the study. Serum total testosterone (TT), free testosterone (fT), 25(OH)D, dihydroepiandrosterone sulphate, LH, FSH, thyroid stimulating hormone, cortisol, 17 OH-progesterone, fasting glucose, insulin levels were evaluated after 12 hour fasting. HOMA-IR (fasting glucose level x fasting insulin /22.5) was calculated.

Results: Serum 17 OH progesterone and 25(OH)D levels were significantly lower in PCOS group ($p < 0.01$). Serum LH, LH/ FSH TT, FT, insulin, ACTH, and DHEAS levels were significantly higher in PCOS group ($p < 0.01$). There was statistically significant negative correlation of 25(OH)D levels with PCOS, LH/FSH, TT, fT, DHEAS and FGS. There was no statistically significant correlation between 25(OH)D levels and age, body mass index and insulin resistance.

Conclusion: The results of this study indicated that vitamin D deficiency is highly prevalent among women with PCOS independent of body mass index. We also demonstrated that vitamin D deficiency was correlated with hyperandrogenism in PCOS women. Low serum 25(OH)D levels might exacerbate PCOS symptoms. Large intervention trials are needed to evaluate the effect of vitamin D supplementation on hormonal and clinical parameters in PCOS women.