Vitamin D concentration and VDR polymorphisms in women with PCOS
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PCOS is the most common cause of anovulatory infertility in women and insulin resistance play an important role in its etiology. Recently according to the pleiotropic action of vitamin D, it is some evidence that vitamin D deficiency can be involved in the etiology of insulin resistance and metabolic syndrome in PCOS. Several study showing association of 25 (OH)D with serum androgens and SHBG, however the observations sometime are not similar. Serum Vit D deficiency was BMI independently associated with low insulin sensitivity. Our data from 140 women PCOS and 100 healthy controls shown that the serum Vit.25 (OH)D were negatively correlated with BMI, waist circumference, serum glucose, insulin, HOMA and positively with HDL cholesterol levels, and supporting several others study. VDR regulates more than 3% human genome including genes that are crucial for glucose metabolism. It has been shown that VDR related polymorphisms (Cdx2, Bsm-I, Fok-I, Apa-I and Taq-I) are related to Vit D metabolism and may contribute to PCOS susceptibility.