Effects of Serum 25-Hydroxyvitamin D concentration on Insulin Resistance and IVF-ET outcomes in PCOS

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Abstract.

Objective To explore the potential effects of serum 25-hydroxyvitamin D on insulin resistance and IVF pregnancy outcomes in the patients with polycystic ovarian syndrome (PCOS). Methods The patients with PCOS were divided into vitamin D deficiency (VDD) group and sufficient group according to the concentration of serum vitamin D on GnRHa administered day. To compare and analyze the relationship between 25(OH) D and indicators of insulin resistance and secretion function in patients, and effects on pregnancy outcomes. Results VDD group was more prone to have high blood glucose 1 h post-meal, hyperinsulinemia and insulin resistance, but with significantly lower ISIcomp (P<0.05). G60 and time-glycemic AUC has predictive value on VDD in PCOS. Vitamin D sufficient is in favor of improving the quality of embryos (r=0.3, P=0.014), but does not affect IVF pregnancy outcomes. Conclusion Vitamin D deficiency was prevalent in PCOS and they were more likely to have insulin regulatory dysfunction, but it had no effect on IVF pregnancy rate.

[Key words] 25-hydroxyvitamin D; insulin resistance; embryo; pregnancy
References


