

Association of Vitamin D Levels in Obese and Non-Obese Patients with Polycystic Ovarian Syndrome in East Indian Populations

Authors : Dipanshu Sur, Ratnabali Chakravorty

Abstract : Introduction: Polycystic ovary syndrome (PCOS) is the most common metabolic abnormality such as changes in lipid profile, diabetes, hypertension and metabolic syndrome occurring in women. Hypovitaminosis D was found to be associated with the development of obesity and insulin resistance in women with PCOS. Aim: To evaluate the association of vitamin D levels in obese and non-obese patients with PCOS in an East Indian populations. Methods: A case control study was conducted. It enrolled 100 cases of PCOS based on Rotterdam criteria and 100 ovulatory normal cases matched for their age and BMI. Vitamin D levels were compared in the obese and non-obese PCOS groups and also with the controls. Results: The mean age of subjects was 29.48 ± 3.29 years in the PCOS group and 26.24 ± 2.56 years in the control group. Hypovitaminosis D was present in 75 out of 100 PCOS women (75.0%) and 25 women (25.0%) showed sufficient 25OHD levels ≥ 30 ng/ml. Women with PCOS had significantly lower total serum calcium (8.4 ± 0.25 mg/dl versus 9.8 ± 0.17 mg/dl in controls), and 25 OHD (21.2 ± 2.56 ng/ml versus 32.6 ± 2.23 ng/ml in control group) than ovulatory normal women. This difference remained significant for both groups after adjustment for BMI. Obese women in both groups had significantly lower concentration of calcium and 25OHD than normal weight patients in this study. Conclusion: Our study shows majority of the patients and controls had vitamin D deficiency and there was significant difference in the vitamin D levels in PCOS group and controls as well as obese and non-obese groups. This may reflect the vitamin D deficiency status of the community. Vitamin D deficiency should demands immediate attention as it is a severe problem among the East Indian population.

Keywords : vitamin D deficiency, polycystic ovary syndrome, obese, hypovitaminosis D

Conference Title : ICOG 2015 : International Conference on Obstetrics and Gynaecology

Conference Location : London, United Kingdom

Conference Dates : September 25-26, 2015