Objectives:

Vitamin D, which is important in calcium phosphate homeostasis and bone health, has recently been suggested to be an important factor in the pathogenesis of numerous chronic conditions such as polycystic ovarian syndrome (PCOS). The aim of this study was to investigate the relationship between vitamin D status and premature adrenarche (PA), suggested as a predictor of PCOS.

Methods:

A total of 71 girls with PA and 52 healthy girls, as the control group, were consecutively recruited. Axillary and/or pubic hair development before the age of 8 years were defined as PA. Bone age and anthropometric measures including height, weight, and body mass index (BMI) were obtained. Levels of androgens, 25 hydroxyvitamin D, 1,25 dihydroxy vitamin D, fasting plasma glucose and insulin were measured. Vitamin D insufficiency was defined as <20 μg/mL.

Results:

Bone age, BMI-SDS, HOMA-IR, and androgen levels were significantly higher and 25(OH)D levels were significantly lower in patients with PA. HOMA-IR was significantly higher in patients with vitamin D insufficiency compared to patients with normal vitamin D levels in the PA group. There was a significant correlation between 25(OH)D and HOMA-IR.

Conclusions:

Vitamin D is associated with PA and insulin resistance can be suggested as a factor in this association.

References:
