

عنوان الوثيقة: الحالة التغذوية لفيتامين – د وعلاقة ذلك بصحة العظام في النساء السعوديات الأصحاء.

الموضوع: التغذية السريرية وأمراض الغدد الصماء.

لغة الوثيقة: الإنجليزية.

المستخلص:

Vitamin-D Status in Relation to Bone Health in Healthy Saudi Women

Background: Few studies exist on the various factors that may contribute to vitamin-D status in relation to bone health among Saudi women.

Aims: To determine the factors influencing vitamin-D status in relation to serum 25(OH)D, intact-PTH, bone turnover markers (BTMs), bone mineral density (BMD) and vitamin-D receptor genotype (VDR) among healthy Saudi pre- and postmenopausal women.

Subjects and Methods: A total number of 1172 healthy Saudi women living in the Jeddah area were randomly selected and studied. Anthropometric parameters, socioeconomic status, sun exposure index together with serum levels of 25(OH)D, calcitriol, intact-PTH, Ca, PO₄, Mg, creatinine, albumin and biochemical BTMs were measured. BMD was measured by a dual energy X-ray absorptiometry and VDR genotypes were also determined.

Results: About 10.5% of all women exhibited severe vitamin-D deficiency (serum 25(OH)D < 12.5 nmol/L) and 80.0% of exhibited mild vitamin-D deficiency (serum 25(OH)D < 50.0 nmol/L) with only 11.8% of all women were considered with adequate vitamin D status (serum 25(OH)D > 75 nmol/L). Increased serum intact-PTH (> 7.0 pmol/L) were evident in 18.5% and 24.6% in pre- and postmenopausal women with serum 25(OH)D < 50 nmol/L. Serum 25(OH)D was lower (P < 0.001) and intact-PTH higher (P < 0.001) in the upper quintiles of BMI and WHR. Multiple linear regression analysis showed that BMI, sun exposure index < 0.63, poor dietary vitamin-D supplementation, high WHR and age were independent positive predictors of serum 25(OH)D values (R² = 0.26). The frequencies of VDR genotypes were 32% GG, 45.2% AG and 22.8% AA respectively. There was no significant contribution of VDR genotypes to BMD or BTMs.

Conclusions: Vitamin-D deficiency is highly prevalent among healthy Saudi pre- and postmenopausal women and largely attributed to obesity, poor exposure to sunlight, poor dietary vitamin-D supplementation and age.

ردمدم: 8756-3282

اسم الدورية: العظام (Bone).

المجلد: 1.

العدد: 7.

سنة النشر: 2010م (1431هـ)

نوع المقالة: مقالة علمية.

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