

عنوان الوثيقة: الحالة التغذوية لفيتامين د وعلاقة ذلك بالكثافة الكتلية العظمية والواسمات الهدم بنائية والمورثات الخاصة بمجس فيتامين د في النساء السعوديات قبل وبعد الإصابة بانقطاع الحيض.

الموضوع: التغذية السريرية وأمراض الغدد الصماء.

لغة الوثيقة: الإنجليزية.

المستخلص:

Vitamin-D Status in Relation to Bone Mineral Density, Bone Turnover Markers and Vitamin-D Receptor Genotypes in Saudi Pre- and Postmenopausal Women

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Objectives: To determine the factors influencing vitamin-D status in relation to serum 25(OH)D3, bone turnover markers (BTMs), bone mineral density (BMD) and vitamin- D receptor genotype (VDR) in Saudi women.

Subjects and Methods: A total number of 1267 healthy Saudi women [age =31.9 (7.56) yrs and 66.61 (10.8) yrs] were pre (n=755)and postmenopausal (n=512), respectively] living in the Jeddah area were randomly selected and studied. Anthropometric parameters, socioeconomic status, sun exposure index together with serum concentrations of calcidiol 25-OHD3), calcitriol (1,25(OH)2D3), 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. The relationship between vitamin-D status and other variables were examined using univariate analysis by means of Chi-square test and multivariate analysis using multiple logistic regression analysis. ANOVA was used to examine the differences among women studied according to vitamin-D status.

Results: About 54.5% of Saudi women studied exhibited vitamin-D deficiency (45.8% and 67.0% in pre- and postmenopausal women with serum 25-OHD3 values <50 nmol/L respectively. About 78.8% of Saudi women studied exhibited vitamin-D insufficiency with serum 25-OHD3 values <75 nmol/L. No significant differences in 25-OHD3 levels were evident among Saudi women wearing different dress style. Serum 25-OHD3 levels correlated positively with age (r=0.31), parity (r=0.22), dietary vitamin-D intake (r=0.18),sun exposure index (r=0.22), serum Ca (r=0.15), phosphate (r=0.16), and inversely related to intact -PTH (r=-0.29), OC (r=-0.17), BAP (r=-0.15), sCTX (r=-0.20) and sNTX (r=-0.21) (at P<0.05 for all correlations), respectively. Multiple linear regression analysis showed that age, dietary vitamin-D intake, socioeconomic status, and sun exposure index were independent positive predictors of serum 25-OHD3 values (R2=0.22). 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 insufficient sunlight exposure and poor socioeconomic status. It is also associated with increased bone turnover with no influence of VDR genotypes on BMD or BTMs.

ردم:

اسم الدورية: مدونات التغذية وهشاشة العظام.

المجلد: 1.

العدد: 7.

سنة النشر: 2009م (1430هـ)

نوع المقالة: مقالة علمية.

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