

عنوان الوثيقة: تفاعل هرمون الغدة الجار درقية مع نقص فيتامين – دفي النساء السعوديات (سن ما بعد الطمث) وعلاقة ذلك بتكوين الجسم والعظام وطريقة العادات المعيشية

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لغة الوثيقة: الإنجليزية.

المستخلص:

Parathyroid hormone response to Vitamin D insufficiency in Saudi postmenopausal women in relation to body composition, bone and life-style characteristics.

Objectives : To assess the effect of vitamin D insufficiency in relation to parathyroid hormone (PTH) response, bone metabolism, body compositions and lifestyle characteristics among Saudi postmenopausal women.

Subjects and Methods : A total of 724 Saudi postmenopausal women (> 50 years) living in the Jeddah area were studied. Bone mineral density (BMD) and body composition were measured by dual-energy x-ray absorptiometry. Serum 25(OH)D and intact- PTH were measured together with biochemical bone turnover markers including [formation: serum osteocalcin (s-OC), procollagen type 1 N-terminal propeptide (s-PINP); and resorption: C-telopeptide fragment of type-1 collagen (s-CTX); and urinary cross-linked N-telopeptide type 1 collagen (u-NTX)], serum HGF-1 and serum minerals. Women exhibiting vitamin D deficiency (serum 25(OH)D < 50 nmol/L) were stratified by tertiles of serum intact-PTH: secondary hyperparathyroidism (SHPT) defined as those responded with intact-PTH values in the highest tertile; functional hypo-parathyroidism (FHPT) defined as those non-responding with intact-PTH values in the lowest tertiles, whereas women with serum intact-PTH levels in the mid-tertile were defined as having intermediate parathyroid status.

Results: Serum 25(OH)D levels were significantly higher ($P < 0.01$) in SHPT as compared with that of FHPT. Bone turnover markers were significantly increased and BMD [neck femur and spine (L1-L4)] values were decreased in women with SHPT ($P < 0.05$; each case). Women with SHPT were heavier ($P < 0.01$) and had 21-26% higher fat mass ($P < 0.001$) than corresponding women with FHPT. Using regression analysis, significant predictors of fat mass were serum-intact-PTH ($r = 0.231$, $P < 0.01$), s-OC ($r = -0.117$, $P < 0.05$), and s-PINP ($r = -0.112$, $P < 0.01$) with no effect of serum 25(OH)D.

Conclusions: Vitamin D deficiency (25(OH)D < 50 nmol/L) is associated with variable PTH responses. The greater body and fat mass in women with SHPT as compared with FHPT suggested that PTH excess may contribute to fat accumulation in Saudi postmenopausal women with vitamin D deficiency.

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