

Evaluation of Urine Deoxypyridinoline and Bone Mineral Density in 861 Chinese during Routine Health Examination.

陳榮邦

Chan WP;Liu JF;Chi WL;;

摘要

Abstract

The aim of this study was to investigate the interrelation among urine deoxypyridinoline (DPD), age, sex, and bone mineral density (BMD) and to clarify whether DPD can be used to screen for low bone mass (T-score <-1) of the lumbar spine and proximal femur in the Chinese population. We reviewed medical records over a 1-yr period of all subjects who completed an annual health examination. A total of 302 men (age: 48.20 +/- 10.86 yr) and 559 women (age: 46.45 +/- 11.16 yr) who lived in the Taipei area, had no major systemic disorders, and underwent urine DPD test and BMD examination of both the lumbar spine (L-BMD) and proximal femur (F-BMD) were recruited. The urine DPD was weakly correlated with middle age in men ($r = 0.154, p < 0.01$). There was no correlation between DPD and age in women. The DPD and L-BMD were weakly correlated in both middle-aged men ($r = -0.165, p < 0.05$) and women ($r = -0.171, p < 0.01$), and moderately correlated in elderly women ($r = -0.315, p < 0.01$). There was a higher correlation between DPD and F-BMD in men than in women, especially in the middle-aged groups (men: $r = -0.258, p < 0.01$; women: $r = -0.170, p < 0.01$). Women in the highest tertile of DPD had 2.40 times the risk (95% confidence interval: 1.49-3.85) of those in the lowest tertile after age adjustment. There was poor agreement or none between DPD and BMD measurements in patients with low bone mass at either site in either sex. Urine DPD tests to substitute for BMD measurements in routine health examination for Chinese is not recommended.