NSNZ Concurrent Oral Session 3: Micronutrient Nutrition

International perspectives on vitamin D and implications for bone health

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Background - Vitamin D is a fat-soluble compound, synthesised in the skin as a result of sunlight exposure. It is found in fish oils, but an unsupplemented diet provides little vitamin D. There is evidence of significant reductions in nonvertebral fractures from replacement regimens particularly if vitamin D is combined with calcium therapy. Vitamin D deficiency is common among institutionalised elderly and recent data suggests that vitamin D status may also be inadequate among younger adults for optimal bone health.
Objective – To assess the vitamin D status in a population of healthy postmenopausal women living in Malaysia, and identify influencing factors.
Design – Cross-sectional study of 276 randomly selected healthy Chinese and Malay women aged 50 between and 65 yr, and more than 5 yr postmenopausal. Serum 25-hydroxyvitamin D (25 (OH) D), parathyroid hormone (PTH), diet, anthropometry and physical activity were assessed.
Outcomes – Serum 25 (OH) D was significantly lower in Malay women (44.4 ± 10.6 nmol/L) compared to Chinese women (68.8 ± 15.7 nmol/L) ($P<0.05$). Hypovitaminosis D (serum 25 (OH) D between 50-100 nmol/L) was present in 27% of Malay and 87% of Chinese women. Vitamin D insufficiency (serum 25 (OH) D between 25-50 nmol/L) was present in 71% of Malay and 11% of Chinese women. Serum 25 (OH) D was significantly correlated to BMI, fat mass and PTH.
Conclusions – A high prevalence of vitamin D inadequacy exists amongst healthy postmenopausal women living in Malaysia, which may have considerable implications for public health.