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RELATIONSHIP OF PHYSICAL PERFORMANCE AND BONE MINERAL DENSITY IN A TAIWANESE METROPOLITAN ELDERLY POPULATION

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Aims: Previous study reported positive association between BMD and hand grip strength in Taiwanese elders living in long-term care facility. The aim of this study was to examine the relationship between BMD and various physical performances in community-dwelling elders in Taiwan.
Methods: A cross-sectional study was conducted in elders living in 8 administrative Lis at north district of Taichung City in 2009. A total of 838 elders (392 women and 446 men), aged 65–94 years old, were recruited. BMD and appendicular skeletal muscle mass are measured by DXA (GE-Lunar DPX Pro, Lunar Corporation, Madison, WI, USA). Low bone density was defined as: (1) osteopenia: a BMD value between 1 and 2.5 SD below the mean of men or women age 20–29 years as reference group. Physical performances including balance (one leg limb stand), physical function (gait speed, 20-s chair stand test, timed up and go test and 5-min walk test) are measured for each elder.
Results: The prevalence of normal, osteopenia and osteoporosis was 51.3 %, 35.1 % and 13.6 %, respectively. The mean walking meters of 6-min walk test for normal, osteopenia and osteoporosis groups were 433.7±129.4, 432.8±110.0 and 384.3±159.1, respectively. The mean of grip strength for normal, osteopenia and osteoporosis groups were 28.9±8.3, 26.0±7.7 and 22.1±7.9, respectively. We observed elders with osteopenia and osteoporosis had worse flexibility, 5-min walk test and grip strength than those with normal BMD by using linear regression models with adjustment for age, sex, body composition, exercise behavior, and comorbidity.
Conclusions: We conclude that osteopenia and osteoporosis elders have greater loss in flexibility and physical function than those with normal BMD.

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LOW BACK PAIN ASSOCIATED WITH SOCIODEMOGRAPHIC FACTORS, LIFESTYLE AND OSTEOPOROSIS: A POPULATION-BASED STUDY

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Aims: To investigate the prevalence and factors associated with low back pain among adults in Taiwan.
Methods: The National Health Interview Survey, a cross-sectional study, was conducted from October 2002-March 2003 to gather data from 24,435 adults aged 20 years and older selected randomly from Taiwan's general population. Participants with history of low back pain were assessed using a comprehensive questionnaire. Additional assessment of osteoporosis diagnosed by physician was also evaluated.
Results: Among the 24,435 adults, 25.7 % had reported low back pain within the past 3 months. Factors associated with low back pain included female gender (odds ratio (OR)=1.67, 95%CI=1.43–1.95), low education (OR=1.38, 95%CI=1.23–1.55), and blue-collar work (OR=1.16, 95%CI=1.07–1.26). Patients with osteoporosis were more likely than those without osteoporosis to have low back pain (OR=2.55, 95%CI=2.33–2.78) or frequent low back pain (OR=4.15, 95%CI=3.66–4.70). The ORs of frequent low back pain in association with osteoporosis in men and women were 5.77 (95%CI=4.66–7.15) and 3.49 (95%CI=2.99–4.07), respectively.
Conclusions: Low back pain is prevalent among Taiwanese adults and is associated with osteoporosis.
Acknowledgements: This study was supported by China Medical University Hospital (grant number 1MS1), Taiwan Department of Health Clinical Trial and Research Center for Excellence (grant number DOH101-TD-B-111-004) and Taiwan Department of Health Cancer Research Center of Excellence (grant number DOH101-TD-C-111-005).

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IS THE RECOMMENDED DAILY ALLOWANCE FOR VITAMIN D TOO LOW FOR THE KASHMIRI PREGNANT WOMEN?

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Aims: To determine the vitamin D status in apparently healthy pregnant Kashmiri women, and whether the recommended daily allowance for vitamin D in pregnancy is sufficient to maintain a normal vitamin D status in this population.
Methods: 165 consenting pregnant women attending the antenatal clinic of the Department of Obstetrics & Gynecology of our Institute were enrolled. All subjects underwent a detailed history and physical examination as per a preformed proforma.