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Abstract

Normative Values of Ultrasound Tibial Bone Densitometry for Chinese Women in Hong Kong

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A prospective, cross-sectional study was conducted to establish the normative values of speed of ultrasound waves (SOS) as an indicator of bone status in Hong Kong Chinese Women. From 18 March 1997 to 18 March 1998, 1058 normal healthy women were recruited for this study following strict criteria. Written consent was obtained. A questionnaire was completed by each study subject. Using the SoundScan 2000, the speed of ultrasound waves (SOS) in meters per second(m/s) was measured along a fixed longitudinal distance at the mid-tibial cortex. Results of SOS for each age group were plotted. The ultrasound velocity was significantly higher in premenopausal women (n=659) than in postmenopausal women (n=399) with mean +/- SD = 3947.3 +/- 78.7 m/s Vs 3864.0 +/- 108.0 m/s respectively ($p<0.0001$). Our study shows that tibial SOS measurement provides useful information in the assessment of bone status in healthy women of various age groups. It has potential application in screening for women at risk of osteoporotic fractures with the advantages of being cheap, easy to perform, non-invasive and radiation-free. (HKJGOM 2000; 1 :17-20)

Keywords : Bone densitometry, Ultrasound, Osteoporosis