Prevalence and Factors Associated with Sarcopenia in Hong Kong Chinese Population: a Cross-Sectional Study

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Introduction
Sarcopenia, an age-related loss of muscle associating with increased risk of fall incident, has become a public health issue in western population. Little is known about prevalence of and factors associated with sarcopenia among Hong Kong Chinese population.

Objectives
This study aimed to investigate the prevalence of sarcopenia in community-dwelling Hong Kong Chinese population and examine its associated factors.

Methodology
218 community-dwelling population aged over 40 were recruited. Standardized measures of muscle mass, handgrip strength, and a timed 4-meter walk were examined according to European Working Group on Sarcopenia in Older People guideline. SARC-F was administered to detect persons at risk for adverse outcomes from sarcopenia. Participants also completed validated measures of physical activity level, exercise self-efficacy and psychological well-being.

Result
Muscle mass, reflected by Mean appendicular skeletal mass/height2 (ASM/ht2), was 5.67±0.67 and 4.62±0.51 kg/m2 in men and women, respectively. 209 (95.9%) and 127 (58.3%) of participants showed low levels of muscle mass and muscle strength, respectively. According to cut-off points recommended by Asian Working Group for Sarcopenia, the prevalence of pre-sarcopenia, sarcopenia, and severe sarcopenia was 36.24%, 59.17%, and 0.64%, respectively. Obese subjects and those with a history of diabetes and hypertension were prone to develop sarcopenia (60%, 75.8%, and 65.7%, respectively). Obese patients showed a higher risk of sarcopenia [odds ratio (OR): 10.889, 95% confidential interval (CI): 1.303, 90.981]; patients with
hypertension exhibited significantly increased risk of pre-sarcopenia (OR: 6.778, 95% CI: 1.539, 29.842). Results of multiple regression showed that sarcopenia was more prevalent among female (p = 0.026) and those with inadequate physical activity (p = 0.008). Sarcopenia is highly prevalent in Hong Kong Chinese population and is closely associated with gender, physical inactivity, obesity, and a history of hypertension and diabetes. Timely health promotion interventions are needed to prevent and treat sarcopenia for at-risk and sarcopenic population.