

THE RELATIONSHIP BETWEEN PHYSICIAN DIAGNOSED ARTHRITIS WITH SARCOPENIA STATUS

肌少症與關節炎之關聯性

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Objective: Sarcopenia was prevalent among elder population. It was associated with disability, increasing social economical burden and mortality. Arthritis was believed to cause elder people function decline. Our aim was to investigate the association between the prevalence of physician diagnosed arthritis with that of sarcopenia.

Methods: A total of 1,038 older residents living in the central region of Taiwan were recruited. Among them, 882 received Dual-energy X-ray absorptiometry examination. Sarcopenia was defined as appendicular muscle mass divided by body weight less than two standard deviations below the mean of young people in addition to low grip strength and/or slow walking speed. Presarcopenia was defined as low muscle mass or low performance except sarcopenia group. Arthritis was obtained from individual statement of physician diagnosed arthritis. Statistics analysis of Student's t test, and chi-square test were used. Multivariate logistic regression model was used to estimate the odds ratio of having arthritis in prefrail and frail older adults compared to those who were robust for four body mass index (BMI) categories.

Results: After adjustment for age, gender, social habits, BMI, waist circumference, mean arterial pressure, biomarkers, the adjusted odds ratios (95%

confidence interval) of having arthritis were 1.53 (1.01-2.32) among those with presarcopenia, 1.99 (1.06-3.74) among subjects with sarcopenia, respectively, compared to those with normal ASM & performance. In addition, the trend was significant in all models. Low muscle mass was associated with higher prevalence of arthritis after adjustment of age and sex, and the result was not observed when comparing low performance (grip strength & walk speed) to prevalence of arthritis.

Conclusion: The risk of arthritis was associated with low muscle mass, and presarcopenia, sarcopenia status. Intervention to arthritis or sarcopenia could offer mutual benefit. Further study was needed to confer the causative relationship.

Key word: sarcopenia, arthritis, low muscle mass