Frailty Syndrome in Ambulatory Patients with COPD

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Background: Frailty is a state of increased risk of unfavorable outcomes when exposed to stressors, and COPD is one of the several chronic illnesses associated with the condition. However, few studies have been conducted regarding the prevalence of COPD and its related factors in Southeast Asia.

Objective: This study aimed to determine the prevalence of frailty in COPD patients and to identify the associated factors in these populations.

Methods: A cross-sectional study of COPD patients who attended a COPD clinic was conducted from May 2015 to December 2016. Baseline characteristics were collected, and diagnosis of frailty was based on FRAIL (fatigue, resistance, ambulation, illnesses, and loss of weight) scale. Descriptive statistics were used to analyze baseline data. Factors associated with frailty were analyzed using univariate and multivariate regression analyses.

Results: The prevalence rates of frailty and pre-frailty were 6.6% (eight out of 121 cases) and 41.3% (50 out of 121 cases), respectively among COPD patients. Fatigue was the most common component of FRAIL scale, which was more frequently in frail patients than non-frail patients (odds ratio 91.9). Factors associated with frailty according to multivariate analyses were comorbid cancer (adjusted OR 45.8), at least two instances of nonelective admission over the past 12 months (AOR 112.5), high waist circumference (WC) (AOR 1.3), and presence of sarcopenia (AOR 29.5).

Conclusion: Frailty affects 6.6% of stable COPD patients. Cancer, two or more instances of nonelective hospitalization over the past 12 months, high WC, and presence of sarcopenia are associated with frailty. Early identification and intervention in high-risk patients should be recommended to prevent or delay the adverse outcomes of frailty.

Keywords: Frailty syndrome, FRAIL scale, Chronic obstructive pulmonary disease, Sarcopenia