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Association of Chronic Obstructive Pulmonary Disease Stages with Musculoskeletal Pain Sites and Mobility in Patients at Central Chest Clinic in Colombo, Sri Lanka

HHJ Rupasinghe[1], HADS Perera[1#], MKI Priyaranjana[1], FMD Chellapillai[1], and SADCS Senavirathna[1]

[1]Faculty of Allied Health Sciences, General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka

[#]helanirupa@gmail.com

Abstract

Chronic Obstructive Pulmonary Disease (COPD) is a respiratory disease, that results in progressive airflow limitation and restricts the normal breathing pattern which is irreversible. Musculoskeletal pain and mobility are affected by the severity of the disease. The general objective was to evaluate the association of COPD stages with musculoskeletal pain sites and mobility in COPD patients at Central Chest Clinic in Colombo, Sri Lanka. Specific Objectives were to identify the most occurring musculoskeletal pain sites in COPD patients and to determine the association between mobility and COPD stages. A descriptive cross-sectional study was conducted with the participation of 135 COPD patients with age between 30-79 years. The pain site was assessed by administrating a brief pain inventory questionnaire. Timed Up and Go (TUG) test was performed to assess the mobility and the reference value confounded the age. Data were statistically analyzed using SPSS software (version 20) and $p<0.05$ was considered as significant. The test results reflected that the association between COPD stages and musculoskeletal pain site was not statistically significant ($p=0.354$). In accordance with descriptive statistics, most responded musculoskeletal pain sites according to the COPD stages were mild stage-chest, moderate stage-shoulder, severe and very severe stage-lower back. A sub-group analysis was done for age (41-50 yrs, 51-60 yrs-chest and 61-70 yrs, 71-79 yrs-lower back). The association between COPD stages and mobility was strongly positive ($p=0.01$). As conclusion, there was strong association between COPD stages and the mobility whereas there was no association between COPD stages and musculoskeletal pain site.

Keywords: *COPD, Musculoskeletal pain, Mobility*