

OP-37: Effectiveness of physiotherapy in pulmonary rehabilitation program for patients with chronic obstructive pulmonary disease at National Hospital for Respiratory Diseases, Sri Lanka

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Introduction: Chronic obstructive pulmonary disease (COPD) is a chronic airway disease which could be improved by physiotherapy interventions such as pulmonary rehabilitation (PR). Improvements in physical fitness and breathing difficulty results in an increase in quality of life of COPD patients. Thus, this study aimed to determine the effectiveness of physiotherapy for COPD patients in a PR programme at National Hospital for Respiratory Diseases (NHRD), Sri Lanka.

Methods: This retrospective descriptive study included 75 patients with COPD, of which 92% were males (n=69). Physiotherapy interventions consisted of pre-designed chest clearance techniques, breathing and relaxation exercises, endurance, and stretching and strengthening exercises. Frequency and intensity of interventions were adjusted according to the baseline health status of the participants. Pulmonary function, physical functionality, level of dyspnoea, and health status of the patient were assessed using lung function tests (FEV₁), 6-minute walk test (6MWT), modified-BORG scale, COPD assessment tool (CAT) respectively at the baseline of the programme, at 7th week and at 20th week.

Results: Mean age of the participants was 68.39 years (SD=8). Mean height, weight and body mass index were 160.91 cm (SD=6.72), 53.608 kg (SD=10.36) and 20.57 kgm⁻² (SD=3.122), respectively. Majority of the participants were smoking males (n=67; 89%). The 6MWT results (mean) were significantly improved (p<0.05) from 345.81 m (SD=93.4) at baseline to 404.45 m (SD=83.37) at 20th week. Mean modified-BORG scale scores were significantly (p<0.05) reduced from 6.36 (SD=1.768) at baseline to 4.32 (SD=1.435) at 20th week, while the mean CAT score reduced from 20.89 (SD=6.287) at baseline to 13.87 (SD=5.614) at 20th week. Severity stage of COPD did not change significantly (p>0.05).

Conclusions: Physiotherapy interventions in PR improved physical functionality, breathlessness and health status of COPD patients. Effects of physiotherapy interventions on severity of COPD should be further studied.

Keywords: chronic obstructive pulmonary disease, pulmonary rehabilitation, physiotherapy