Title: Outcome of pulmonary rehabilitation in patients after acute exacerbation of chronic obstructive pulmonary disease

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Body: Introduction COPD is associated with impaired exercise performance and functional capacity. Pulmonary rehabilitation in COPD is an evidence based intervention which improves the exercise capacity and quality of life. Aims and Objectives To evaluate the effect of early pulmonary rehabilitation after an acute exacerbation on exercise capacity and quality of life in patients with COPD. Methods We evaluated the benefits of early pulmonary rehabilitation in patients with COPD following acute exacerbation.Sixty patients with recent history of acute exacerbation were enrolled into the study. Baseline evaluation and randomization was done allotting 30 patients each into the intervention and control groups.Patients in both the groups received the standard management of COPD. While only the intervention group underwent a 12 week pulmonary rehabilitation program in addition.The exercise capacity was assessed by six minute walk distance (6MWD). St. George’s respiratory questionnaire (SGRQ) was used to measure the quality of life. Assessment of both these parameters was made at the beginning of the study and at the end of three months. Results The baseline characteristics of both the groups were found to be similar. The mean 6MWD value increased by 37.9 meters in the intervention group and the change was significant (p< 0.001). The mean total SGRQ score showed a decline of 13.8 units (p< 0.001) in the intervention group which was statistically significant. Conclusions Early pulmonary rehabilitation after an acute exacerbation of COPD has significant benefits on the quality of life and exercise capacity of the patients and should be imbibed into the standard management protocol for COPD.