

NCT02757092

Title: The Impacts of Pulmonary Rehabilitation Therapy on Patients After Thoracic Surgery

Study protocol:

Compared to traditional surgery, video-assisted thoracoscopic surgery (VATS) has minimized the wounds and post-surgery complications. However, literature suggested older adults have a higher risk of thoracoscopic complications, such as pain, pulmonary function insufficiency, pneumonia and decreased exercise capacity. Although home-based pulmonary rehabilitation may be beneficial for older adults following thoracoscopic surgery, it has not received much attention. Therefore, the purpose of this study was to investigate the effect of home-based pulmonary rehabilitation on the objective (lung function, exercise capacity, respiratory muscle strength, and lung expansion capacity) and subjective (degree of dyspnea) outcomes in older adults with lung tumors after video-assisted thoracoscopic surgery (VATS). A randomized, controlled design was used. All subjects gave their consents before entering the study. This study was approved by the Institutional Review Board of Chang Gung Memorial Hospital. Thirty-six older individuals with lung tumors underwent VATS were randomly assigned into the control group receiving standard health education and the experimental group underwent a 6-week home-based pulmonary rehabilitation program in addition to standard health education. Outcome measures included exercise capacity (6-min walk test), respiratory muscle strength (maximal inspiratory pressure [MIP], and maximal expiratory pressure [MEP]), lung expansion capacity (Triflo), pulmonary functions, and modified Borg dyspnea scores. All patients were evaluated at 2, 6, and 12 weeks after discharge from the hospital. Descriptive statistics expressed as the mean \pm standard deviation or the median and interquartile range according to the distribution of variables. Student's t test and two-way repeated measures ANOVA were used for variables with normal distribution, while Mann-Whitney U rank test for variables without a normal distribution. Fisher's exact test was used for categorical variables. For group comparisons, an intention-to-treat analysis was performed. For all comparisons, $P < .05$ was considered statistically significant. All analyses are performed using SPSS 20.0 software.