E-Poster

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Rehabilitation Program in Patients With Post-Tuberculosis Lung Disease

Topic: Health Conditions (Nervous System, Musculoskeletal System, Cardiopulmonary System)

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BACKGROUND

Post-tuberculosis lung disease (PTLD) refers to lung damage that may persist in individuals who have previously had active tuberculosis, even after successful treatment. Common symptoms of PTLD include persistent cough, shortness of breath, reduced exercise tolerance, and impaired lung function. PTLD may cause obstructive or restrictive lung damage, decreasing effort tolerance and affecting quality of life (QoL). Although there is limited specific research on the outcomes of pulmonary rehabilitation in patients with PTLD, the aim of our study was to analyze the effects of a comprehensive rehabilitation program on pulmonary function, physical performance, and QoL in patients with PTLD and obstructive respiratory dysfunction.

METHODS

Thirty-seven subjects with PTLD and obstructive respiratory dysfunction (FEV1 ≥ 45%) were examined and participated in an 8-week, patient-focused pulmonary rehabilitation program. They were divided into two groups: Group 1 (n=20) - followed a kinetic training program only; Group 2 (n=17) - followed a rehabilitation program that included kinetic training and physical interventions such as deep oscillation therapy and high-intensity Multiwave Locked System (MLS) laser therapy.

The supervised exercise program lasted six weeks, following a two-week inpatient pulmonary rehabilitation period. Measured outcomes included spirometry parameters (FEV1/FVC ratio), distance walked in six minutes (6MWD), and quality of life as measured by the St. George's Respiratory Questionnaire (SGRQ).

RESULTS

The pulmonary rehabilitation program resulted in clinically and statistically significant improvements in 6MWD (9% in Group 1, $p = 0.004$; 14% in Group 2, $p = 0.008$) and SGRQ scores (22% in Group 1, $p = 0.01$; 28% in Group 2, $p = 0.005$) at eight weeks in both groups. These improvements remained evident at three months. Significant improvement in the FEV1/FVC ratio was observed only in Group 2 after eight weeks of rehabilitation ($p = 0.0001$).

CONCLUSION

While pulmonary rehabilitation cannot reverse lung damage caused by PTLD, it can optimize existing lung function, enhance physical activity levels, and reduce symptoms such as cough and breathlessness.

Physical therapy incorporating high-intensity laser therapy and a low-frequency, low-intensity pulsating electrostatic field (deep oscillation) can complement classical kinetic training.

Statement of Disclosures

None

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