

Abstract

Title

The effect of airway clearance techniques on patients with Chronic Obstructive Pulmonary Disease.

Objective

The main purpose of this study is to expose and evaluate the efficacy of airway clearance techniques on patients with Chronic Obstructive Pulmonary Disease by using pulmonary functions and Quality of Life measurements from recent studies.

Methodology

This thesis is literature review. The selected studies were according to inclusion and exclusion criteria. The selections of recent studies were published from the year of 2000 until 2017 in English language. The following research databases were selected to identify the relevant topic: PubMed, MEDLINE, Embase, Cochrane, PEDro, and CINAHL. The parameters' results from the articles have been also selected by evaluation the statistical differences according to the P-values.

Results

Twenty-three articles out of 117 have been found according to inclusion criteria, exclusion criteria, and outcome measures. The techniques were active cycle of breathing technique (ACBT), positive expiratory pressure (PEP), temporary of positive expiratory pressure (T-PEP), Oscillating positive expiratory pressure (O-PEP), high-frequency chest wall oscillation (HFCWO), slow expiration with glottis opened in lateral posture (ELTGOL), postural drainage, and autogenic drainage. The patients age was ranged between 30 to 91 years old. The parameters of pulmonary functions that were found in differences between articles are: FEV₁, FVC, FEV₁/FVC ratio, PEF, FEF, ERV, TLC, and RV. There were variations in statistical differences although there were frequent using of PEP and its modifications.

Conclusion

The evidence of airway clearance techniques on patients with Chronic Obstructive Pulmonary Disease by evaluation of pulmonary functions and quality of life measurements are still poor although there were mentioning of improvements in some studies.

Key words

Chronic Obstructive Pulmonary Disease, airway clearance techniques, chest physiotherapy, nonpharmacological management, respiratory care, pulmonary function tests, Quality of Life measurement, mucus clearance, pulmonary rehabilitation.