

Thesis Title A Study of the Oxygen Saturation Changes,
Peak Expiratory Flow Rate of the
Bronchial Drainage Position with
Percussion and Vibration in Acute
Lung Illness

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ABSTRACT

In acute lung illness patients, airway obstruction is one problem that can produce hypoxemia. Chest physiotherapy which are employed as an aid in the removal of retained secretion. The main objective of this study is the determination of the effect of chest physiotherapy including three different modified postural drainage positions; supine lying, left and right side lying with percussion and vibration on arterial oxygenation and airway obstructive condition in acute lung illness patients who admitted in respiratory care unit with nonspecific

exacerbation. Thirty-five patients are divided into two groups, the first group is seventeen diffused lung illness patients and the second group is eighteen localized lung illness patients. Both groups of patients were treated with medication adjuncted with chest physiotherapy. Oxygen saturation (SaO_2) and pulse rate (PR) were determined during chest physiotherapy. Peak expiratory flow rate (PEFR), respiratory rate (RR) and blood pressure (BP) were determined after a single session of chest physiotherapy. From the results in both groups of patients, it was found that oxygen saturation and pulse rate were significantly increased during chest physiotherapy ($P < 0.01$). In addition, respiratory rate and blood pressure were also significantly increased after a single session of chest physiotherapy ($P < 0.05$). However, peak expiratory flow rate did not significantly change after treatment.

From the results of this study, it was concluded that during chest physiotherapy including three different modified postural drainage positions; supine lying, left and right side lying with percussion and vibration, did not appear to produce hypoxemia, but improved the oxygenation. However, after a single session of chest physiotherapy, did not show the improvement of airway obstructive condition in both groups of acute lung illness patients.