

Effect of Inspiratory Muscle Training on Diaphragmatic Strength Following Coronary Revascularization

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Abstract : Introduction: Postoperative pulmonary complications (PPCs) are the most common complications observed and managed after abdominal or cardiothoracic surgery. Hypoxemia, atelectasis, pleural effusion, or diaphragmatic dysfunction, are often a source of morbidity in cardiac surgery patients, and are more common in patients receiving unilateral or bilateral internal mammary artery (IMT) grafts than patients receiving saphenous vein (SV) grafts alone. Purpose: The aim of this work was to investigate the effect of Threshold load inspiratory muscle training on pulmonary gas exchange and maximum inspiratory pressure (MIP) in patient undergoing coronary revascularization. Subject: Thirty three male patients eligible for coronary revascularization were selected to participate in the study. Method: They were divided into two groups(17 patients in the intervention group and 16 patients in the control group), the interventional group received inspiratory muscle training at 30% of their maximum inspiratory pressure throughout the hospitalization period in addition to routine post operative care. Result: The results of this study showed a significant improvement on maximum inspiratory pressure(MIP), Arterial-alveolar pressure gradient (A-a gradient) and oxygen saturation in the intervention group. Conclusion: Inspiratory muscle training using threshold mode significantly improves maximum inspiratory pressure, pulmonary gas exchange tested by alveolar-arterial gradient and oxygen saturation in Patients undergoing coronary revascularization.

Keywords : coronary revascularization, inspiratory muscle training, maximum inspiratory pressure, pulmonary gas exchange

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