The Effects of Preoperative Short-term Intense Physical Therapy in Lung Cancer Patients: A Randomized Controlled Trial

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Setting the scene:

To investigate the effect of preoperative short-term intense physical therapy in lung cancer patients.

What did they do?

60 consecutive, operable lung cancer patients without major cardiac morbidity were included. In this study Routine blood tests included haemoglobin, alkaline phosphatase and serum calcium estimations. All patients underwent postero-anterior and lateral chest radiographs, bronchoscopy, and basic pulmonary function tests with or without DLCO and V/Q scan, and blood gases analysis. Computerized tomography (CT) scans of the thorax, abdomen (or abdominal ultrasonography), and cranium (or cranial MRI), whole body bone scintigraphies were done in most patients for pre-treatment staging. Mediastinal lymph node sampling using cervical mediastinoscopy were carried out in all patients. Patients, before planned operation after standard cervical mediastinoscopy which was performed for preoperative mediastinal staging, were randomly allocated (according to hospital record number) to control or study group. In the study group, intensive physical therapy (IPT) (chest physiotherapy and walking exercise) was achieved, one week before the planned surgery. In the study group of patients, the program was continued with the same frequency during the postoperative period until discharge. Chest physiotherapy consisted of diaphragmatic, pursed lip, segmental breathing exercise, usage of incentive spirometry, coughing exercise. The walking exercise was done by the patient on a treadmill three times a day, according to the patient's tolerance to exercise speed and time. During the walking exercise, a warm-up and cool-down were included. Oxygen saturation, heart rate and Borg scale of patients were monitored during exercise

Takeaway message:

Intensive physical therapy appeared to increase oxygen saturation, reduce hospital stay, and change the ventilation/perfusion distribution. It had a significant, positive effect on the exercise capacity of patients