Letter to the Editor

Pulmonary rehabilitation in patients undergoing resection for non-small cell lung cancer. A preoperative and postoperative added value

Luigi Ferri\textsuperscript{a*}, Alfredo Cesario\textsuperscript{ab}\textsuperscript{*}
Stefano Margaritora\textsuperscript{a}, Pierluigi Granone\textsuperscript{a}
\textsuperscript{a}Pulmonary Rehabilitation, IRCCS San Raffaele, Rome, Italy
\textsuperscript{b}Thoracic Surgery Unit, Catholic University, Rome, Italy

Received 26 December 2007; accepted 17 January 2008; Available online 13 February 2008

Keywords: Pulmonary rehabilitation; Lung cancer; Surgery

We read with interest the report from Bobbio et al. on preoperative pulmonary rehabilitation (PrePR) in COPD/ non-small cell lung cancer (NSCLC) patients who are candidates for surgery [1]. We have recently published our own experience based on early stage NSCLC patients where surgery could not be considered due to impaired pulmonary function [2]. The eight patients who accepted to enter the study could then be operated (necessary functional criteria for surgery were re-met). Interestingly a degree of functional amelioration was noticed: increases were observed in the FVC, both in terms of volume and percentage of that predicted (+0.44 l and +12.9%, respectively) and less significantly in FEV1. Apart from this, an amelioration of the exercise endurance (6 min walking test) was reported.

We would like to invite the authors of [1] to discuss the possible reasons for this difference (no substantial change in function, as expressed by volumes, in their experience vs a significant change in ours) whereas, apart from the differences in the protocol (the length and the ‘inpaitent’ condition may have helped situations like suspension of smoking habit/compliance to therapy along with a comprehensive psychological support to foster motivation), we could attest to the fact that only patients with a very impaired function were enrolled in our observation and this fact may have given a certain enhancement to the relative improvement of volumes (potential interpretation bias).

Our group has a long lasting interest in pulmonary rehabilitation in NSCLC surgical patients. In fact we have recently published our experience in postoperative pulmonary rehabilitation (Post-PR) whereas most functional parameters among treated (rehabilitated) patients were improved and, on the contrary, global function in the control group (non-rehabilitated patients) was homogeneously decreased [3]. Despite the substantial difference at baseline in functional terms of the two groups (rehabilitated worse, non-rehabilitated better), the comparison of treated vs untreated patients 1 month after the operation did not show significant difference thus demonstrating a clinically significant amelioration in the treated ones.

Both the PrePR and the PostPR approaches have proved to benefit NSCLC patients who are candidates for or who have undergone surgery. For this reason we have planned a more comprehensive clinical experimentation to add more power to our preliminary results within properly controlled prospected trials (we are perfectly aware that at least in the PrePR setting, recruitment can be quite difficult). Moreover we are pursuing a translational approach investigating, on the clinical side, the value of the BODE index [4] as a validated indicator of the effects of PR and, on the opposite side of the translational research loop, the possible validation of some molecular biomarkers (mostly related to oxidative stress) to verify any potential match and value in the monitoring of the effects of PR in COPD and NSCLC surgical patients.

As well we would like the authors [1] to briefly comment on these approaches in the light of fostering a comprehensive and constructive discussion towards the full inclusion of PR into the treatment strategy for NSCLC.

References


* Corresponding author. Address: General Thoracic Surgery, Catholic University, Largo A. Gemelli, 8, 00168 Rome, Italy. Tel.: +39 06 30156326; fax: +39 03 3051162.
E-mail address: alfcesario@yahoo.com (A. Cesario).
doi:10.1016/j.ejcts.2008.01.019

Reply to the Letter to the Editor

Reply to Ferri et al.

Antonio Bobbio\textsuperscript{a*}, Alfredo Chetta\textsuperscript{b}
\textsuperscript{a}Unit of Thoracic Surgery, Department of Surgical Science, University of Parma, Italy
\textsuperscript{b}Division of Respiratory Diseases, Department of Clinical Science, University of Parma, Italy

Received 16 January 2008; accepted 17 January 2008; Available online 14 February 2008

Keywords: Pulmonary rehabilitation; Preoperative functional evaluation

We are very pleased by the interest shown in our paper ‘Preoperative pulmonary rehabilitation in patients undergoing lung resection for non-small cell lung cancer’ by this distinguished group of investigators [1]. These authors have recently reported the results of inpatient preoperative pulmonary rehabilitation (PR) in patients with NSCLC and a concomitant extremely severe airflow limitation [2]. Similarly to the results of our study, in the Cesario et al. study, PR led to improvement in exercise capacity and patients were able to undergo surgery. In addition, unlike our study Cesario