Differences between smokers and never-smokers COPD patients

INTRODUCTION

COPD international epidemiological studies show a relevant proportion of never-smoker patients. It may reach 20% in some series. The aim of this study is to find the difference in anthropometric measures and pulmonary function tests between these two groups.

METHODS

This is a cross-sectional cohort study. Patients who had never smoked were collected in a tertiary hospital if they had in the last 2 years a spirometry with a FEV1/FVC < 0.7 after a bronchodilation test. A new spirometry following the ATS/ERS criteria was performed in order to ensure the diagnosis. Smokers with COPD were gathered in a specialized consultation in the same tertiary hospital. We measured anthropometric data, comorbidities, spirometry, plethysmography, DLCO and 6 minute walking test.

RESULTS

We gathered 216 patients, 165 smokers and 51 never-smokers. There were no differences in age, gender or FEV1% between cohorts. The body mass index, fat percentage, DLCO and the distance in the 6MWT were higher in never-smokers (29.3 vs. 27.0 p=0.004, 36.9 vs. 32 p=0.001, 84.3% vs. 60.1% p<0.001 and 526 vs. 488.8 p=0.029, respectively). The degree of airflow obstruction (IC/TLC) and the BODE index score were higher in smokers (0.36 vs. 0.4 p=0.003 and 1.42 vs. 0.87 p=0.031, respectively).

CONCLUSIONS

Our study shows that smokers with COPD are clearly different from never-smokers in anthropometrics, with more severe BODE scores and worse respiratory functionalism. Separating these entities could help to end the misunderstanding surrounding this phenotype of COPD and enhance the role of tobacco as the main etiology of the disease.