

Perseverant, non-indicated treatment of obese patients for obstructive lung disease

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Received 2012 May 24; Accepted 2013 Nov 5.

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Abstract

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Background

Bronchodilators are a mainstay of treatment for patients with airflow obstruction. We hypothesized that patients with obesity and no objective documentation of airflow obstruction are inappropriately treated with bronchodilators.

Methods

Spirometric results and medical records of all patients with body mass index >30 kg/m² who were referred for testing between March 2010 and August 2011 were analyzed.

Results

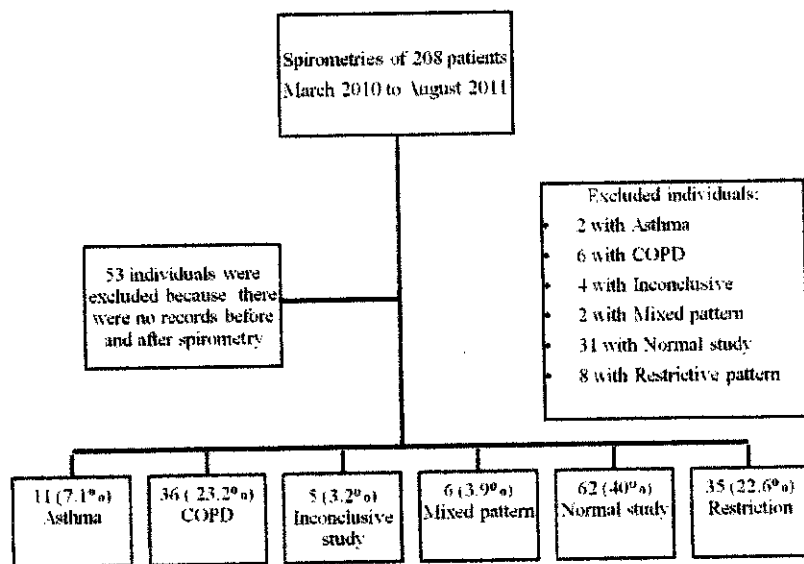
155 patients with mean age of 52.6 ± (SE) 1.1 y and BMI of 38.7 ± 0.7 kg/m² were studied. Spirometry showed normal respiratory mechanics in 62 (40%), irreversible airflow obstruction in 36 (23.2%), flows suggestive of restriction in 35 (22.6%), reversible obstruction, suggestive of asthma in 11 (7.1%), and mixed pattern (obstructive and restrictive) in 6 (3.9%). Prior to testing, 45.2% (28 of 62) of patients with normal spirometry were being treated with medications for obstructive lung diseases and 33.9% (21 of 62) continued them despite absence of airflow obstruction on spirometry. 60% (21 of 35) of patients with a restrictive pattern in their spirometry received treatment for obstruction prior to spirometry and 51.4% (18 of 35) continued bronchodilator therapy after spirometric testing. There was no independent association of non-indicated treatment with spirometric results, age, BMI, co-morbidities or smoking history. All patients with airflow obstruction on testing who were receiving bronchodilators before spirometry continued to receive them after testing.

Conclusion

A substantial proportion of patients with obesity referred for pulmonary function testing did not have obstructive lung disease, but were treated nonetheless, before and after spirometry demonstrating absence of airway obstruction.

Keywords: Spirometry, Pulmonary function, Obesity, Asthma, Airflow obstruction, Restriction

Figure 1



Selection of participants and diagnoses according to pulmonary function tests.